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AMIGA FORMAT

MASSIVE 220 PAGE ISSUE

ISSUE 15 ■ OCTOBER 1990 ■ £2.95

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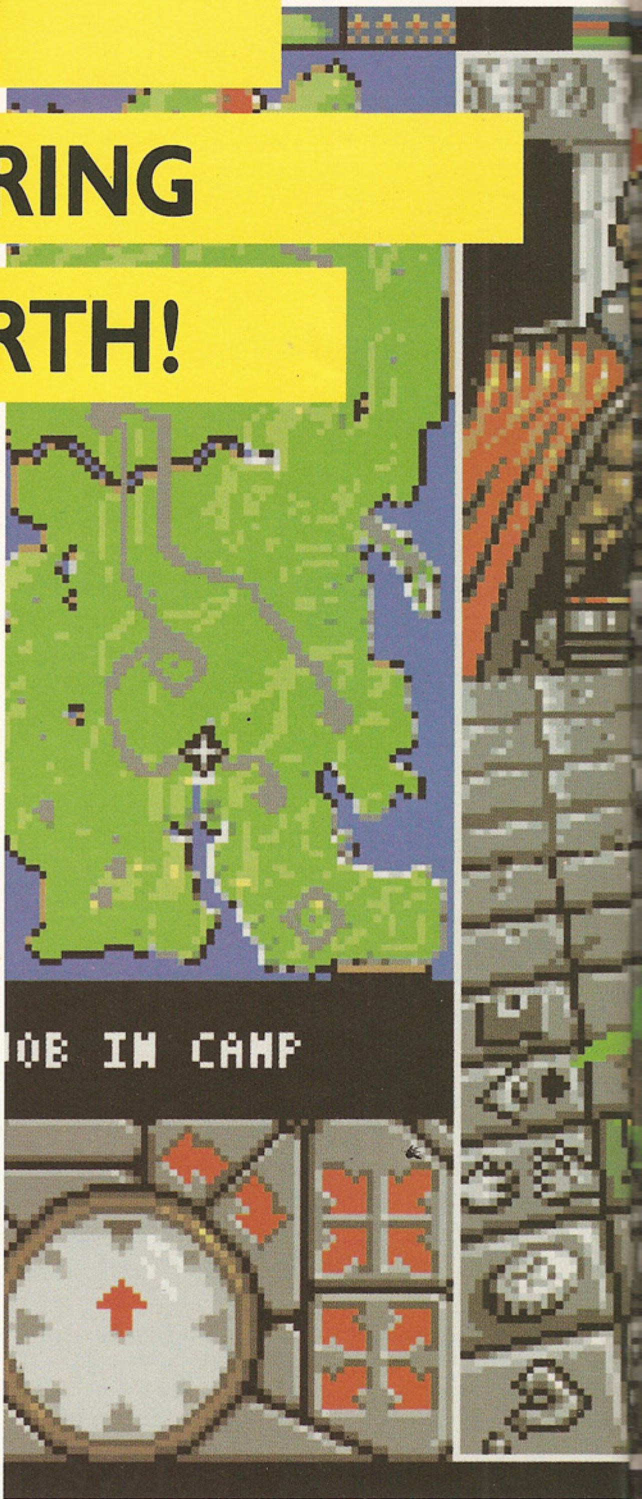
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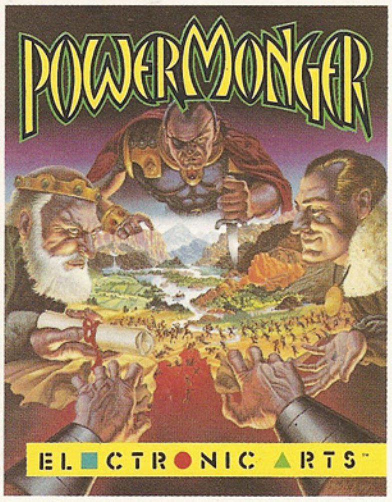
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In Populous, you challenged the gods. Now man is your adversary in the form of three unscrupulous and violent tribal leaders.



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Amiga and Atari ST available Oct. '90. IBM/PC from 1991

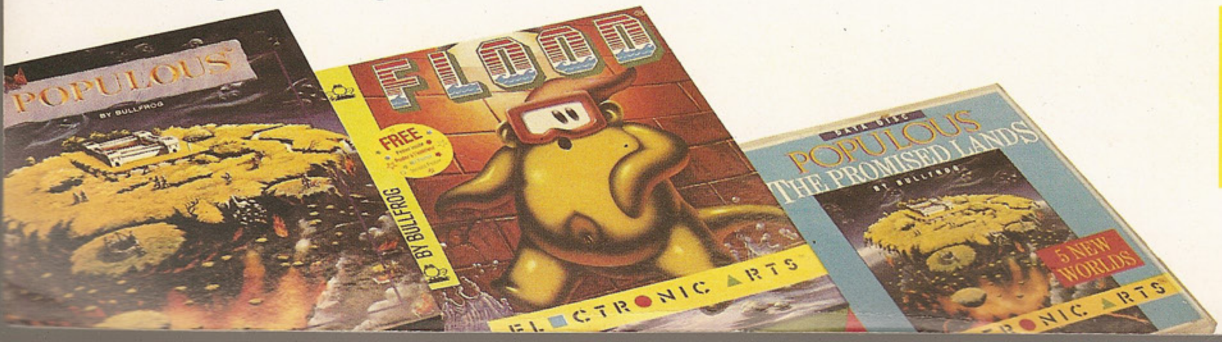
£29.99

Be as mean as them and match force with force, or be more cunning, play Mr Nice Guy and win over the local villagers.

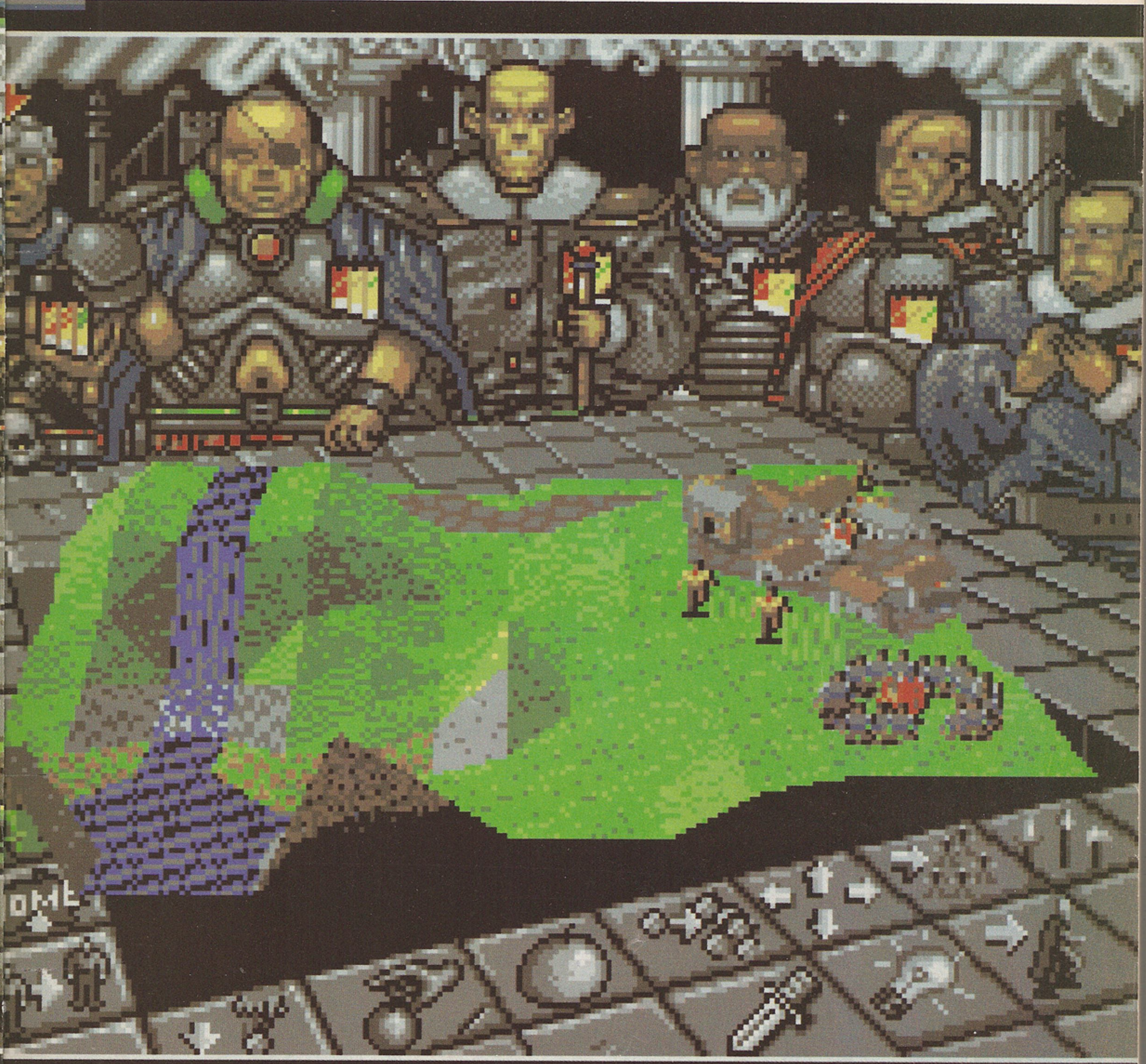
By doing so you not only swell your numbers, but also keep your larders stocked, which is essential in ensuring the loyalty of your army.

With the stunning graphics you've come to expect from Bullfrog, Powermonger is a living world of mountains, forests and rivers, sun, snows and rain, where inventiveness and strategic skill can triumph over mere brute force.

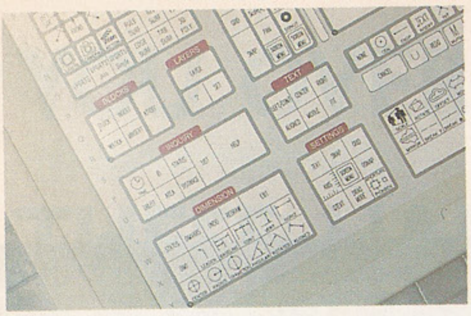
Powermonger will test you to the limit, but if you still have any energy for adventure left, these other great Bullfrog titles still lie in wait.



EL



"Better than Populous", Peter Molyneux of Bullfrog, Creators of Populous.







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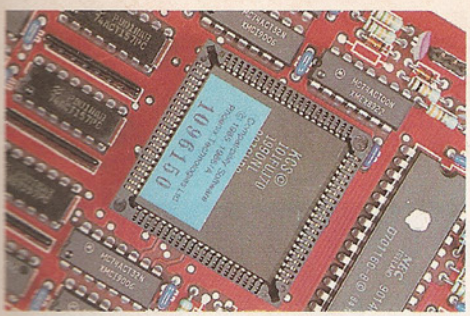
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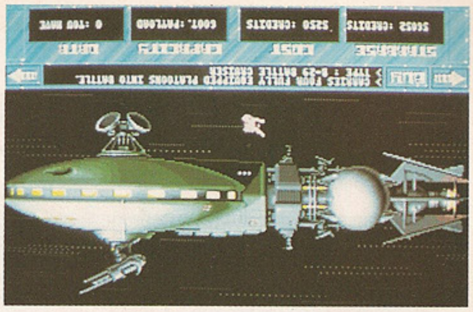
PC EMULATOR 185

The PC PowerBoard slotted into an A500



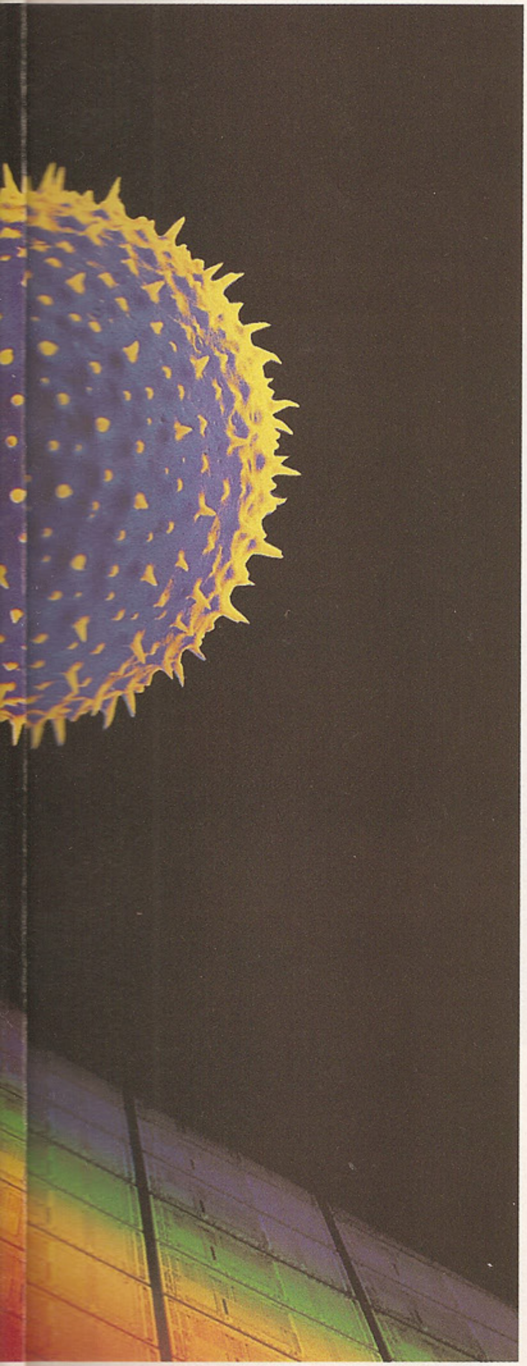
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Supremacy, one man's fight to rule a galaxy



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If you read *Amiga Format* every month, why not make sure of your copy by getting it delivered straight to your door? Save hassle, save money and get a free game, too! See Page 125 for details! Also, take advantage of our Mail Order bargains.

MAIL ORDER P.206

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Disk Extra 93

FLIPIT AND MAGNOSE

MARTIANS ON A QUEST FOR WATER IN IMAGEWORKS' PLAYABLE DEMO

GET SET GO!: Create your own menu systems ■ **MIDI ANALYSER:** A useful utility for monitoring MIDI input and output ■ **VECTACHECK:** Suss out your Amiga's darkest secrets ■ **COLOUR WORKBENCH:** Adds life to WB

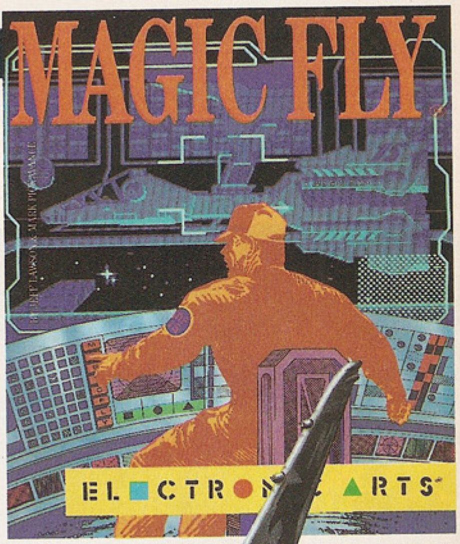
GIRL ACTIONS

A SHAMEFUL PUN, BUT A GREAT COMPLETE PLAYABLE GAME

ZEROVIRUS: Smart and effective virus hunter ■ **CANARY:** Create a sacrificial disk to save yourself from viruses ■ **PIC OF THE MONTH:** A reader's art

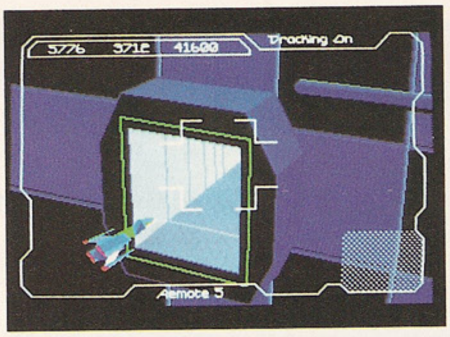
We Interrupt this Magazine

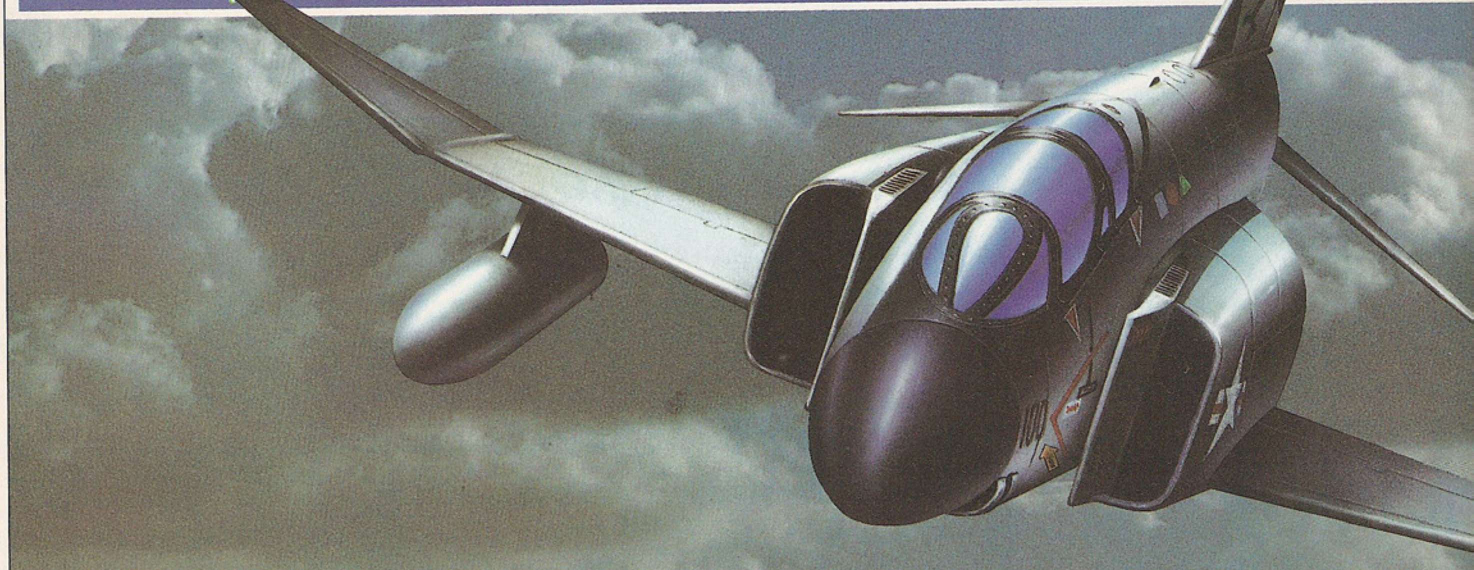
MAGIC FLY™ Available in September for Amiga/Atari ST



You're a fighter pilot of the future – travelling through a giant asteroid in your vehicle the Magic Fly. Your aim is to destroy key parts of the complex and discover the space fighter codenamed the Moth.

● Over 30 different spacecraft to scan and shoot. Feel your skin creep as you see a Black Widow or Tarantula crawl towards you. ● A vast and complex network of tunnels to explore, providing hours of gameplay. ● Selection of weapons – 3 types of lasers, missiles and a range of superweapons, like the Cat, Limper and the Atomic Sledgehammer! ● Solid 3D graphics.







CHUCK YEAGER'S ADVANCED FLIGHT TRAINER™ 2.0

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Experience white knuckle flying thrills with the great flight trainer. Now fly any of 18 different aircraft, all with accurate aerodynamics and realistic 3D modelled graphics. Join the US Navy's Blue Angels or the USAF Thunderbirds in formation, or race 6 courses. Other features include more realistic terrain, unlimited camera angles and night flying. Let General Yeager personally guide you through AFT 2.0, sharing his tips and great flying experiences on the new Flying Insights™ audio tape, included FREE in every package.

We'll use this box to keep you informed about our latest news.

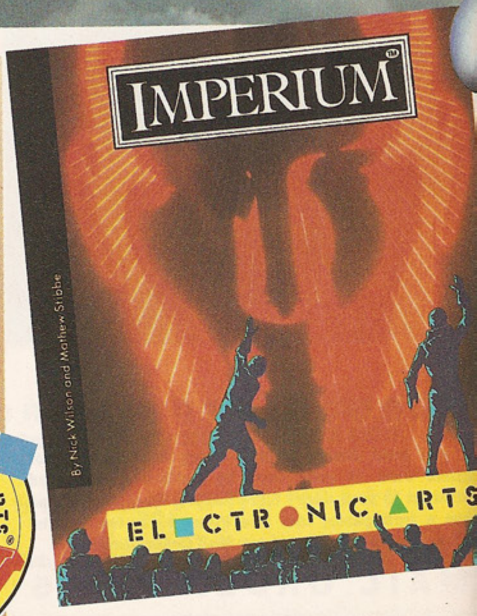
...did you know there is a Flood demo disk available at your retailers?

...be on the look-out for previews of PowerMonger from Bullfrog, the authors of Populous.

...our first CD game was released in Japan. Now FM-Towns owners can play Populous, a world-wide phenomenon!

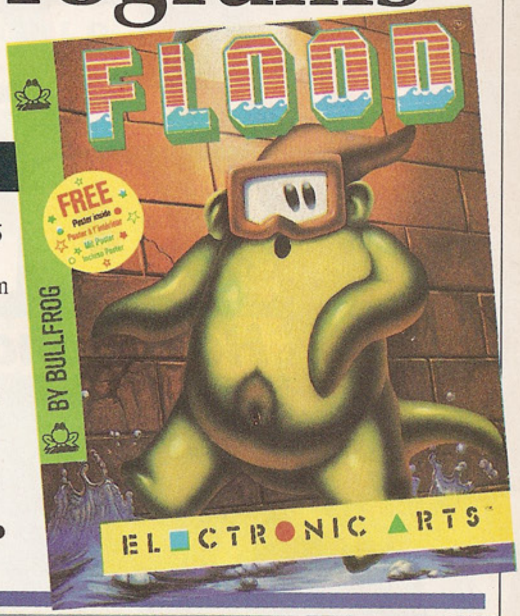
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ELECTRONIC ARTS THE NEW SENSATION



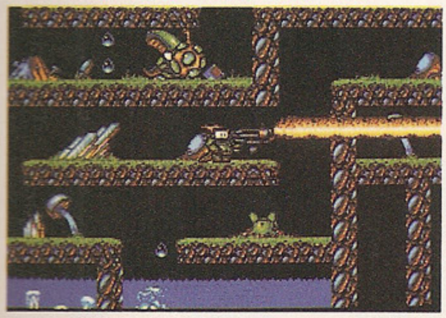
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for some Exciting Programs



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☆ C&VG Hit ☆ Zero Hero ☆ Gen d'or
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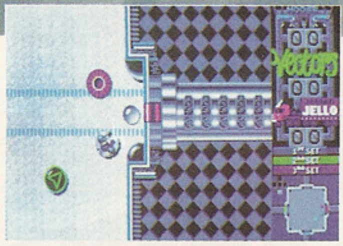
A platform game with a sense of humour and over 35 addictive levels. Help Quiffy escape from the underground caverns to the Earth's surface away from such nasties as the Psycho Teddies and the Creeping doom of the Flood.

● Whacky objects like boomerangs, flame throwers, balloons and spacehoppers ● Humorous monsters to destroy from Bulbous Headed Vongs to Vacuous Gombos. ● Passwords – no need to start from the beginning again! ● Watch Quiffy grip to almost anything – even the ceiling. ● Gurgling tunes and splashy sound effects. ● Numerous puzzles to solve. ● Secret locations.

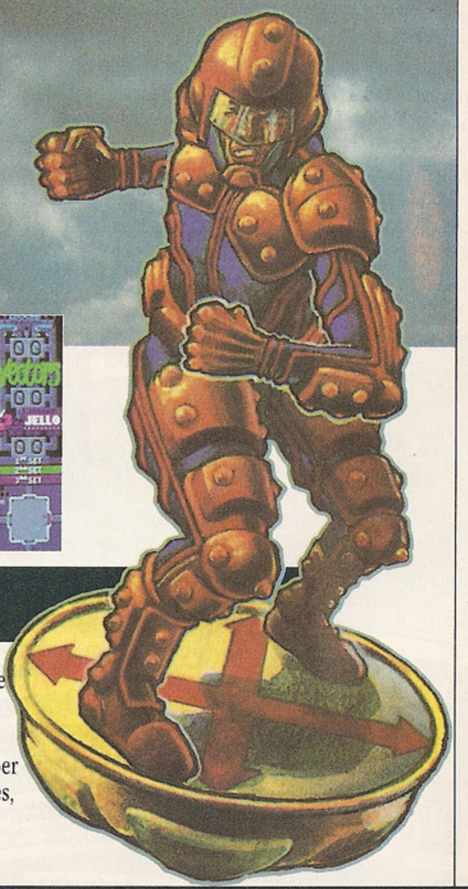


IMPERIUM™
Out Now! Amiga/Atari ST Colour/Mono

"The latest in the splurge of space-trading games is *Imperium*. The objective is to dominate the galaxy by trading with other planets and colonising new worlds. With an array of winning options, *Imperium* may yet be the most engrossing space-trader ever." – ST Format Magazine.



☆ C&VG Hit
☆ Zero Hero
☆ Gen d'or



PROJECTYLE™
Out now! Amiga/Atari ST

Fast and furious multi-player action in the ultimate future sport.

● Multi-directional scrolling featuring parallax, 'vector' and bas-relief graphics. ● Up to 3 players per game and 8 players per league. ● 8 different pitches, each with its own characteristics. ● Extras such as free kicks, chip shots and "loony balls."

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JAMES BOND 007
THE SPY WHO LOVED ME
He's Bond · He's Back · He's 007
James Bond returns in a classic action-packed race against time to save the world from the crazed and power-mad Karl Stromberg.
Use your skills to end the threat of global domination as you seek to outwit Stromberg's mercenaries and prevent a nuclear war between East and West.
Exhilarating chase sequences on land and under the sea involve Q's specially modified Lotus – souped up and armed to the teeth.
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CHRISTOPHER WOOD & RICHARD MAIBAUM
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Available on: Atari ST, Amiga, IBM PC 3.5" & 5.25", Commodore 64 (cassette, disk) Amstrad (cassette, disk) Spectrum +3, Spectrum 48/128
Programmed by: The Kremlin
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Amiga & Atari ST Screenshots
DOMARK

TV game show waits for C4 OK

Computer gaming is set to become a TV sport, courtesy of mould breaking programme makers Hewland International. Taking the form of a UK Computer Games Championship the program could appear as early as next spring on Channel 4.

The program would consist of 13 episodes running for half an hour every week. Each show would feature three different games – a shoot-em-up, a sports sim and an 'odd-ball' – being played on an Amiga 2000. Contestants would be rank-and-file games players who'd proved themselves ace wagglers, most probably recruited through magazines.

Hewland International are currently waiting on Channel 4's reactions to a mock-up episode which featured *Silkworm*, *Chase HQ* and *E-Motion*. Even in the unlikely event that C4 get cold feet it's rumoured that US TV and Eurosport are eager to run with the format.

Jane Hewland, the production company's boss, has a good track record of bringing innovative and unusual projects to the screen, Network 7 a prime example of her previous work. With computer leisure reaching radio we could see a similar explosion in 'Computer Culture' exposure as was experienced when 'Youth Culture' shows like Network 7, DEF II and clones first hit the TV.

RADIO FIVE GETS FORMAT GOLD

National radio is to give computers and software regular coverage on the BBC's new Radio Five. The Formula Five show will be presented by Sue Nelson and cover everything from CDs to computer games. To give the program an authoritative computing voice the BBC have chosen none other than Amiga Format's own Maff Evans to do the talking about new leisure and creativity software in a regular fortnightly slot. To find out more, tune in to Formula Five, Radio Five, 8.30 – 9.00pm, every Thursday, 693m and 909m on Medium Wave.



CONSOLE YOUR AMIGA

Three new 'console' keyboard and monitor stands are out for the A500. The View Centre, Control Centre and Control Centre 'Plus' fit neatly to the machine, giving a flush monitor stand and space for second drives or other hardware. With custom ports to connect joysticks or mice and made of strong coated steel. Prices range from £24.99 to £49.95. Premier Micros ☎ 0480 300738.



ELVIRA STRIKES BACK

Accolade have bought the rights to release the *Elvira* game from defunct software house Tynesoft. The schlock horror hostess game actually helped the fall of the house of Tynesoft, with continual delays on coding. Ironically the game was all but finished when Tynesoft went under and will be hitting the shelves soon under its new Accolade banner.



AMIGANUTS COMPETITION

Amiganuts United are running a novel competition in November with a camera and 50 PD programs as first prize, 20 programs as second prize and 10 programs for the third place. The novelty is that the questions for the competition will be hidden in the files of Amiganuts' November catalogue disk, available from the 1st November. Amiganuts United, 169 Dale Valley Road, Hollybrook, Southampton SO1 6QX. 0703 785680.

A590 180MB UPGRADE KIT OFFER

Upgrades are now available for A590 owners who want to replace their hard drive with a faster and bigger SCSI unit sold by Almathera Systems Ltd. The SCSI drive from Fujitsu has a 25 ms access time compared to the standard Commodore unit which takes 70ms. The SCSI can also transfer data five times quicker than the standard A590 drive.

A standard 20mb A590 can be upgraded to 180mb without the need for any external boxes, extra power supplies or cables. Prices start at £316 for a 43mb drive kit – for non-DIY'ers Almathera also offer an installation service. For further information contact Almathera Systems Ltd ☎ 081 668 9605.

LOOK RIGHT!

The word on the street, the latest in games news

Winner of this month's tactless title award goes to Dinamic for *Satan*. The game itself is a leap-about and bash-em-up featuring a wizard and sword-wielding nutter, but it's the presentation that causes some concern. In a nice black box you get your very own demon-proof medallion, pentagram and inside details on all manner of devilish nasties! The full review will be here next month.

Millennium have announced their pre-Christmas line up and the first to appear will be *James Pond, Underwater Agent*. Starring a fish (JP himself) it's a cutesy adventure where the eponymous cod has to right the wrongs of man, fighting pollution and the destruction of the undersea world.



US Gold are eager to right wrongs too, so they're set to launch *Buck Rogers* into action fora new roleplay strategy outing. Based on a TSR board game, it should jog memories of long summer holidays and bad Buster Crabbe acting over breakfast.

Audiogenic have caught the puzzle game bug and will soon be unleashing *Loopz*. Not a licence tie-up with that new brand of breakfast cereal, it is in fact one of those games that looks simple, plays well and has an addictive hook to shame most non-prescriptive medicines. Following swiftly on comes the re-released *Helter Skelter* and coin-op conversion of the bug-crushing game *Exterminator*.

Domark are starting the Autumn with a pair of big compilations (ooer missus!) *Heroes* features *The Running Man*, a Bond game, *Barbarian* from Palace and *Star Wars*, while *TNT* is a Tengen Compilation that brings the best of recent Atari coin-ops together in one box. On the original product front, Domark are currently coding their first flight sim, *MIG 29 —Fulcrum*, based on the eye-opening Soviet fighter.

The long awaited *F-19 Stealth Fighter* just needed some sound tweaking and serious play testing as this issue went to press. AmFo has seen an unfinished version and the results look good – topical too! With the real things flying into Saudi, you'll be able to join them in spirit at least as one of the theatres of war is the Persian Gulf!



HOORAY FOR HENRIETTA

Scottish software house Scetlander have converted their educational program *Hooray for Henrietta* to the Amiga. The program provides "fun maths" for 5-12 year olds but is flexible enough for older students.

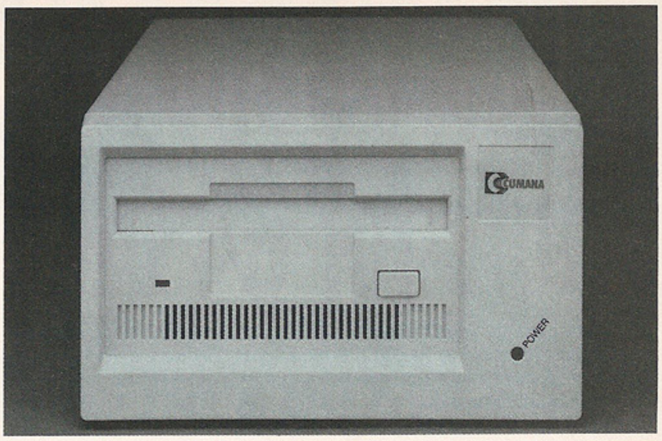
The program is based on three characters – Henrietta, Hopeless Henry and John the Parrot. Problems set by the program have to be answered correctly and in time, in order to stop John the Parrot ruining Henrietta and Henry's wedding. The program also has an assessment system which keeps track of progress and highlights any problem areas. The program costs £24.99 and comes with a John the Parrot badge. Scetlander ☎ 041 357 1659

DELTA 3A TAKES OFF WITH F-19

Voltmage, producers of the Delta 3 analogue joystick, are celebrating the imminent launch of *F-19 Stealth Fighter*. Analogue joysticks are the best 'sticks for flight sims, allowing near perfect response to a player's commands. Although the Amiga has always had the facility to run analogue joysticks few developers had taken advantage of it: until F-19 that is. The Delta 3 retails at £14.95, so for that real flight feeling (and to encourage more developers to exploit the facility) contact your Amiga dealer. Voltmage ☎ 0462 894410.

AMIGA TO GET FRENCH MISTRESS

Educational software publisher Kosmos is bringing its range of specialist tutorial programs to the Amiga. Their software is aimed at everybody from the age of six upwards. The French Mistress, German Master, Spanish Tutor and Italian Tutor can aid anyone from beginners through GCSE standard to business people brushing up their language skills ready for 1992. Priced at £19.95 their vast vocabularies of nouns, adjectives, prepositions and verbs conjugated in six tenses, should even help out advanced students. Kosmos ☎ 05255 3942.



If you have huge amounts of data that needs storing fast then check out Cumana's 'Rewritable optical storage...'

REWRITABLE OPTICAL STORAGE NEW FOR AMIGA

A rewritable optical storage system is available for the Amiga as of September. Combining magneto-optical techniques with fast data access and transferring, plus a 256K buffer, it uses the latest ISO approved to 5.25" optical disk cartridge. This removable cartridge can store 594mb with data retention for 25 years. For full details contact Cumana ☎ 0483 503121.

AMIGA FORMAT OCTOBER CHARTS

The Gallup Amiga Software Chart will now feature here every month. As well as letting you know what's top of Amiga owners' shopping lists, we'll also try to point out some of the more interesting anomalies, oddities, new entries and products bubbling under - as they say on the Chart Show!

The first notable feature, in this our first chart, is *Robocop*'s absence. After over a year in the top spot he's faded out. Other surprising stayers though, are: *Stunt Car Racer* at 100, *Heroes of the Lance* at 93, *Populous* at 72, *F-16 Combat Pilot* at 48 and *Shadow of the Beast* at 26! Of last month's notable releases *Lost Patrol*, *Flood* and *Red Storm Rising* have all charted highly, with the Format Gold *Damocles* stomping straight in at 8. *Neuromancer*, however, hasn't fared so well, only managing 63 at the moment. The most impressive of entries however must be the mighty 33 achieved by *Deluxe Paint* and 22 for *AMOS*. This destroys the myth that serious or creativity software can't hold its own against the big licences and hype of leisure software.

The Gallup All-Price Amiga Software Chart

1	Kick Off II	Anco	£24.99
2	Turrican	Rainbow Arts	£19.99
3	Shadow Warriors	Ocean	£24.99
4	Italia 1990	Code Masters	£4.99
5	Midwinter	Rainbird	£29.99
6	Lost Patrol	Ocean	£24.99
7	F-29 Retaliator	Ocean	£24.99
8	Damocles	Novagen	£24.99
9	Italy 1990	US Gold	£24.99
10	Pro Tennis Simulator	Code Masters	£4.99
11	Emlyn Hughes Int.l Soccer	Audiogenic	£24.99
12	Imperium	Electronic Arts	£24.99
13	World Cup Soccer '90	Virgin	£24.99
14	Flimbo's Quest	System 3	£24.99
15	Treasure Island Dizzy	Code Masters	£4.99
16	Red Storm Rising	Microprose	£29.95
17	Football Manager II	Addictive	£4.99
18	Manchester United	Krisalis	£19.99
19	Battle of Britain	US Gold	£29.99
20	Flood	Electronic Arts	£24.95
21	International 3D Tennis	Palace	£24.99
22	AMOS	Database/Mandarin	£29.99
23	Player Manager	Anco	£19.99
24	Advanced Ski Simulator	Codemasters	£4.99
25	Unreal	UBI Soft	£24.99
26	Shadow of the Beast	Psygnosis	£34.95
27	Rorke's Drift	Impressions	£24.99
28	688 Sub Attack	Electronic Arts	£24.99
29	Champions of Krynn	US Gold	£24.99
30	Bad Company	Logotron	£24.99

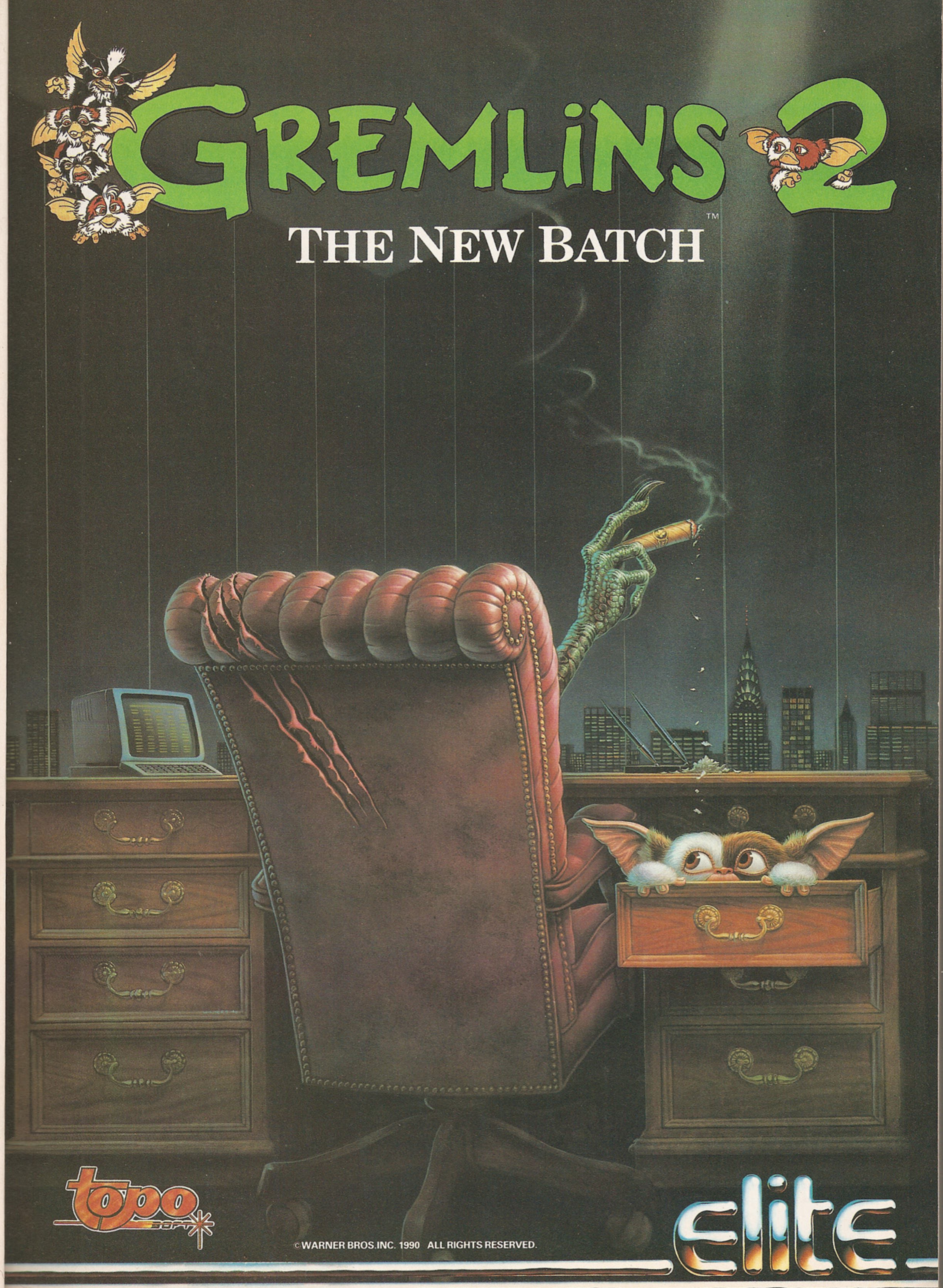
This Chart is compiled by Gallup Ltd.

ACTION PACKED

Digital Integration have unveiled their new budget label Action Sixteen. Kicking off with *Targhan*, *Fast Lane* and *On Safari* the label brings games players recent full-price releases for less than a fiver! The label's strong entrance into the budget arena highlights the intense war for the lucrative 'software under a tenner' top slot.

A GOOD DEED FROM GOOD DEALERS

It's time to put a face to a few of those names you hear on the other end of the telephone and applaud an act of great generosity by three mail order dealers. This is Giles Harwood of Gordon Harwood Computers on the left, Gary Anderson of Merlin Express and Chris Harvey of Track on the right. Normally, all you hear of these guys is seeing their companies' ads in Amiga Format every month or, if you're lucky enough to be on the receiving end of their service, a knock on the door from a courier delivering your goodies.


GREMLINS 2
TM
THE NEW BATCH
topo soft
elite
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One day, an Amiga Format reader with an unusual concern for his fellow man, a guy by the name of Anthony, called us to tell us about a problem he had. A mate of his had suffered a bit of a nervous breakdown and was facing spending the foreseeable future in mental hospital. Anthony wanted to buy an Amiga for his friend, to help while away the hours. Could we help?

In no time at all, Merlin, Track and Harwoods had leapt to Anthony's aid. And they did more than anyone could have expected, too, sending a Batman pack with a RAM expansion along with a whole heap of software. "We felt this was a great way to achieve something", said Giles. "In an industry that is very competitive it makes a refreshing change for competitors to involve one another", replied Chris. And Amiga Format certainly agrees.

Now, remember that these boys haven't got endless reserves of cash so they can't do any more requests. However, you can always take advantage of their generous prices – and rest assured, these are guys who can be trusted when it comes to looking after you. Look for their ads in this issue. It's always nice to have something in life you can rely on...



Giles Harwood, Gary Anderson and Chris Harvey 'Good dealers'

GOLDEN MOUSE

There's yet another alternative mouse on the scene for those who have got bored with their original or seen it go to the mouse house in the sky. This one is the Golden Image mouse from GTI in Germany.

It is very similar to the Naksha mouse and is available for £34.95 direct from GTI or for £39.95 from George Thompson Services in the UK. GTI ☎ 010 49 6171 73048

CHILDREN'S ART IN MOTION

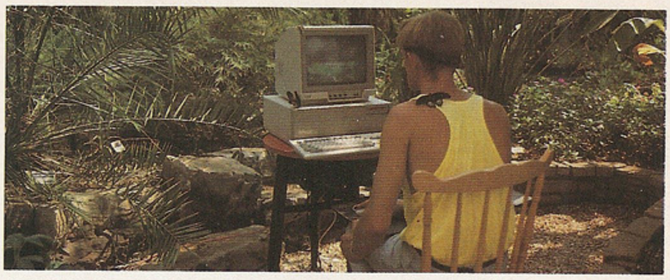


Geoff Schering of Moving Art shows off his impressive system for producing animation sequences for schools.

If you've seen Rolf Harris's latest cartoon programme for children, you may have spotted an Amiga 2000 being used with a frame grabber to produce little black-and-white animation sequences. It's a flexible technique, but capable of much greater use. One company, Moving Art of Somerset, is using it with children in schools to great effect.

Geoff Schering is the man behind Moving Art. At a recent animation course for kids, at the Watershed in Bristol, Geoff showed us how he works. The system he uses is the Marcam/Progressive Peripherals FrameGrabber to digitise in frames of the main animation, which are then coloured and put over a background in Deluxe Paint. Using only an Amiga 500, it's a cheap, flexible and fun system. The kids certainly seem to enjoy getting to grips with it.

Geoff has a wide range of services to help schools and colleges make the most of Amigas they own already or to introduce them to the machine. He's very keen on the Marcam digitiser, too. He can be contacted at 131 Chilton St, Bridgwater, Somerset. Moving Art ☎ 0278 444360



John Still sweats it out to be 'Better than the real thing'

BETTER THAN THE REAL THING

If art really does imitate life precisely, then when you use the next Real Things release you'll be sweating over your Amiga in near-tropical temperatures. Because that's exactly what wildlife artist John Still was doing when he produced the butterfly images for the next Real Things project.

On the hottest day of the year, John was to be seen in the tropical greenhouse of The Butterfly Centre, Eastbourne, slaving away in temperatures up around the 100 degrees Fahrenheit mark. John is an experienced butterfly and insect artist and his butterfly images will first be seen in Real Things' next release, *Real Things – Humans*. This will include a number of figures of men and women in motion as well as other creatures and backgrounds, one particular focus being our troubled rainforests: which is where the butterflies come in. It will be available later in the Autumn. Real Things ☎ 082581 2666

GREAT VALLEY'S GREAT DRIVE

Great Valley Products are a very big name in Amiga hardware supplies and they have just launched another impressive, but expensive, device – a 50 Mb removable media hard disk drive. In other words, a hard disk drive with replaceable cartridges, each of which can contain 50 Mb.

The hard drive has been developed by Ricoh with the software and SCSI controller developed by GVP. The cartridges are 5.25 inches in size and the drive is compatible with all Amigas. Having so much storage capacity at one's disposal means the drive is going to be a boon for any memory-intensive applications or areas where large amounts of data need to be accessed, so multimedia, video work, complex graphics and the like could all benefit. Of course this doesn't come cheap and the US price for the drive, one cartridge and a SCSI controller is $999. Great Valley Products, 600 Clark Avenue, King of Prussia, PA 19406, USA. ☎ 010 1 215 337 8770.

DUAL INTERFACE

Cumana have launched a new combined interface that provides an extra 0.5 Mbytes of RAM and an MFM ST506 hard disk interface as well. The unit plugs into the A501 expansion slot underneath the A500 and has a modified expansion slot cover that enables the hard disk cables to come out neatly and allow access to the memory on/off switch. The board also has a battery-backed real-time clock, DMA support, fast floppy boot software and supports 40 Mb drives with up to eight heads. Price £159.95 from Cumana. ☎ 0483 503121

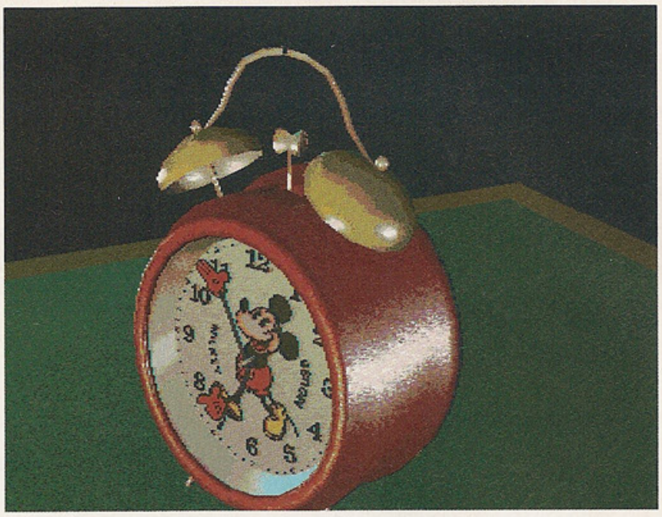
ASSEMBLED DOWN UNDER

Software for the Amiga is springing up all over the place these days – the latest is an assembler from DigiSoft in Australia. Macro68 supports all the Motorola M68000 group of processors as well as the Amiga copper.

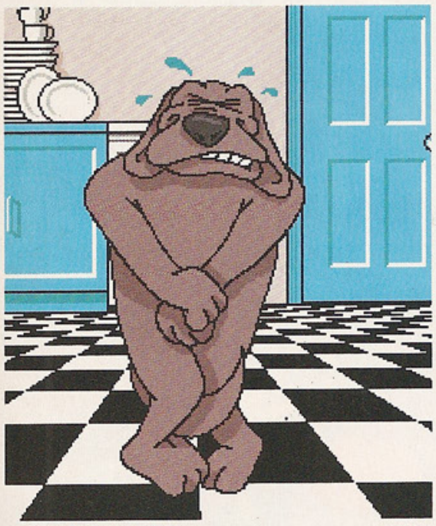
If assemblers are as mystical as water to you then I suggest you skip the next bit where you find out that Macro68 uses the new M68000 assembly language syntax. It has a special structure offset directive to assure maximum compatibility with the Amiga's interface conventions, full listing control including cross-referencing, a user-accessible file where you can customise directives and run-time messages, an AREXX interface is included and there is also a shared library that allows the use of pre-assembled, resident include files.

Well, that's enough techno-wibble, what else you need to know is that Macro68 costs $195 (Australian) and is available from DigiSoft, 12 Dinmore Street, Moorooka, Brisbane, Queensland, 4105 Australia.





Main Video is one of the joint winners of the Edinburgh Animation competition and here are two stills from it.



Nature Calls, joint winner of the comp.

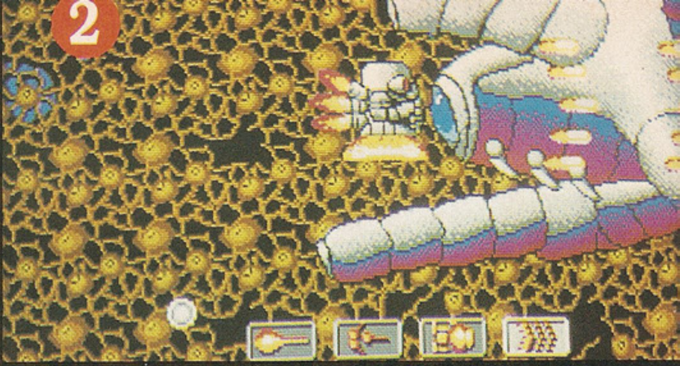
EDINBURGH ANIMATION RESULTS

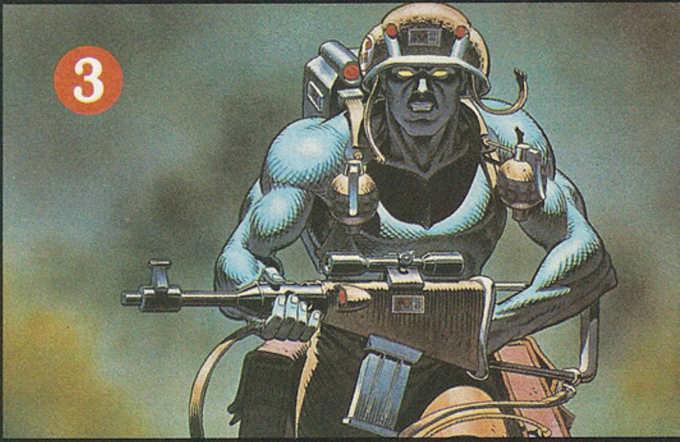
Joint winners of this year's Animation Competition/Exhibition held at the Amiga Centre Scotland were J Gee and E Messina. Nature Calls and Main Video were their respective entries, which were both submitted on video. J Gee won the Real 3D Professional and Image Link packages, while E Messina earned an up grade for their Amiga to an A3000.

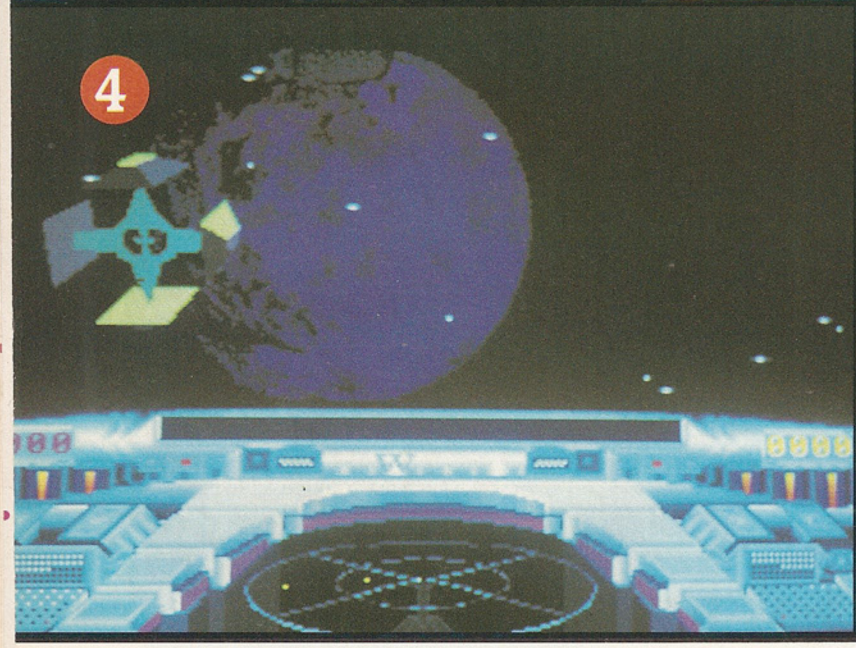
The judges for the competition were Commodore's PR manager Andrew Ball, award winning freelance animator Donald Holwill and one of Scotland's leading corporate TV producers Leslie Mitchell – whose company now uses Amigas to produce real-time animation.

Other prize winners were S Johnston (Trans State Run – video) and K Karlsson (Information about AIDS – video) who came joint second. C Blackmore (Motorway – disk) took third place while C Banks (Zombie City – Disk), A Gill (Tapestry – disk) and K King (Aqua-Snoopy – disk) were runners up. Expect to see a full display of the winning entries in Amiga Format soon.











COMING ATTRACTIONS

Back to the Future of the games scene, Part Fifteen!

1 DRAGON BREED
The latest killing coin-op from Irem, who gave us *R-Type*, is *Dragon Breed*. The aim is to ride four coloured dragons on a mad carnage charge past hostile mythological beasties. Dragons are tougher than your average shoot-out ship as their bodies and tails can act as a shield for the rider or smash incoming enemies.
Publisher **ACTIVISION**
ETA **October/November**

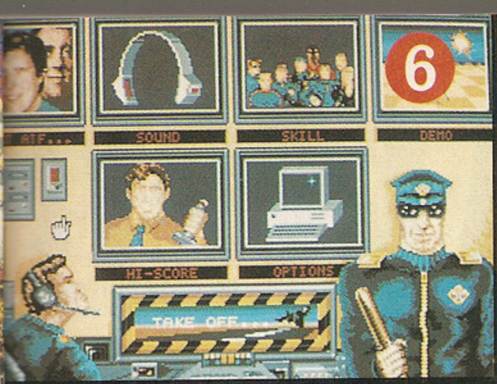
2 ATOMIC ROBOKID
The cutes are making a comeback with *Atomic Robokid* leading the charge. Essentially a shoot-em-up, *Robokid* would be as much at home on the Rainbow Islands as on the world of Xenon. A trainee combat 'bot, he flies, kills and collects power-ups. Huge combat sprites and massive maps mark it out from the crowd.
Publisher **ACTIVISION**
ETA **October**

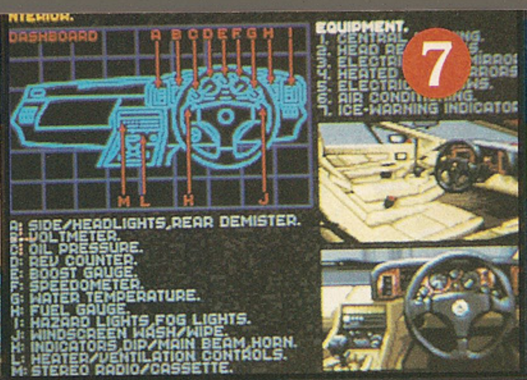
3 ROGUE TROOPER
The clone ranger Rogue Trooper is all set to assault your Amiga screen. You'll be able to join the galactic war as the last of the GIs (the Genetic Infantrymen) in a shoot-em-up and exploration adventure crossover. Based on one of the greatest ever 2000 AD comic characters, who should provide excellent material for the coders of the game.
Publisher **KRISALIS**
ETA **Late September**

4 XIPHOS
Space traders rejoice! This is a 90s *Elite* packed with huge star fields and filled-3D craft. It's also real fast, which is just as well because you play a space trader who wants to make the most out of some major league interplanetary hostilities. By playing both sides against the middle, you do your best to grab the money and RUN!!!
Publisher **ELECTRONIC ZOO**
ETA **October**

5 GREMLINS II
Bright light! Pull open the curtains and cut out the midnight snacks, the Gremlins are back! Little info on the game as yet, but if it's half as funny as the film we're in for a treat.
Publisher **ELITE**
ETA **October/November**

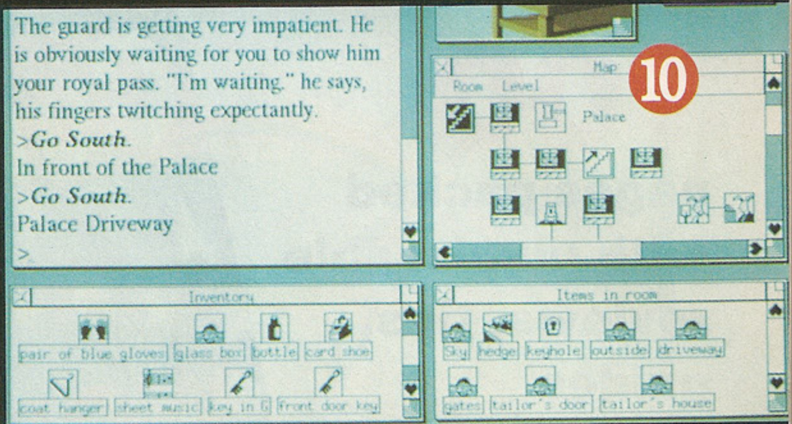
6 ATF II
Veterans who remember the thinking man's shoot-em-up, *Advanced Tactical Fighter*,



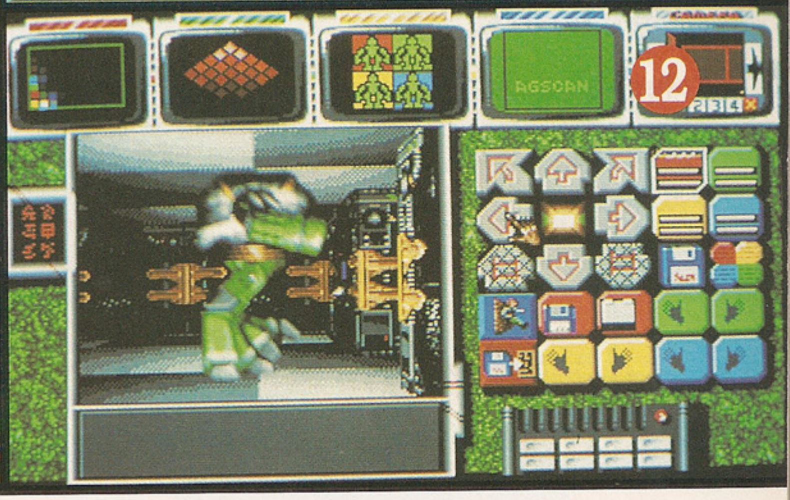












will be pleased to hear that *ATF II* is in the final stages of production. Flying missions in a ground-hugging battle plane, your aim is to bomb, blast and kill as many enemy craft as possible. *ATF II* promises to blend flight sim and thoroughbred shoot-out in a wrist-aching, G-pulling battle to achieve skyborne supremacy.
Publisher **DIGITAL INTEGRATION**
ETA **September**

7 LOTUS ESPRIT TURBO CHALLENGE

Britain's premier supercar is the subject of a new road race game. A split-screen, head-to-head driving challenge, it lets you get the most out of the 246 bhp monster. It may be the only chance many of us get to lay hands on a car that costs more to insure than it does to buy!
Publisher **GREMLIN**
ETA **Late September**

8 TEAM YANKEE

The game of the book of the tank is all but ready to roll. This strategy simulation puts you in command of a four-tank unit, controlling all of the four vehicles simultaneously. The dreaded Reds must be either outwitted or outgunned time and time again as you strive to climb the ranks. All the goodies available to real tank commanders will be there for you to experiment with, to explore and to explode.
Publisher **EMPIRE**
ETA **October**

9 THE LEGEND OF BILLY BOULDER

In a prehistoric (and pre-*Flintstones*) world, Billy Boulder ruled supreme. Or at least he would if he could only find his way through some cities filled with bad guys. He roams his world clad in a bear-skin and armed with a variety of flint weapons, collecting keys and visiting shops en route.
Publisher **US Gold**
ETA **TBA**

10 WONDERLAND

Alice goes through the looking glass once more in this adventure epic. The game can be tailored to suit any player: running on a series of windows you can control the little lady through icon, text or menu. Maps, inventories and graphics pop up in yet more windows. If you find that you don't want a window, close it and enlarge the one you use most.
Publisher **VIRGIN**
ETA **TBA**

11 BADLANDS

The sort-of sequel to *Super Sprint* is gearing up at the Kremlin (Domark's coding house, not Gorby's pad). *Badlands* is a three-way driving game where anything goes. The shooting of annoying opponents is positively encouraged and highly effective, as you race about collecting spanners to improve your buggy's race handling.
Publisher **DOMARK**
ETA **September**

12 CAPTIVE

Tony Crowther liked *Dungeon Master* so much he wrote a bigger, better and bolder game in the same style. *Captive* sets players the task of guiding a bunch of robots on a rescue mission. As they wander, they can be adapted and improved either bodily, with armour, or with extra weapons. Even after a successful rescue there are literally thousands of dungeons to explore because *Captive* is not just big, it's monumentally big.
Publisher **MINDSCAPE**
ETA **September**

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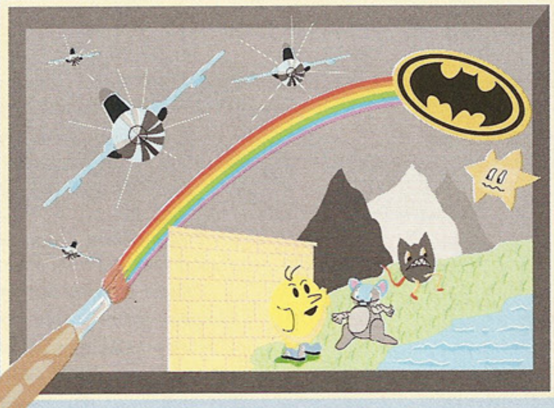
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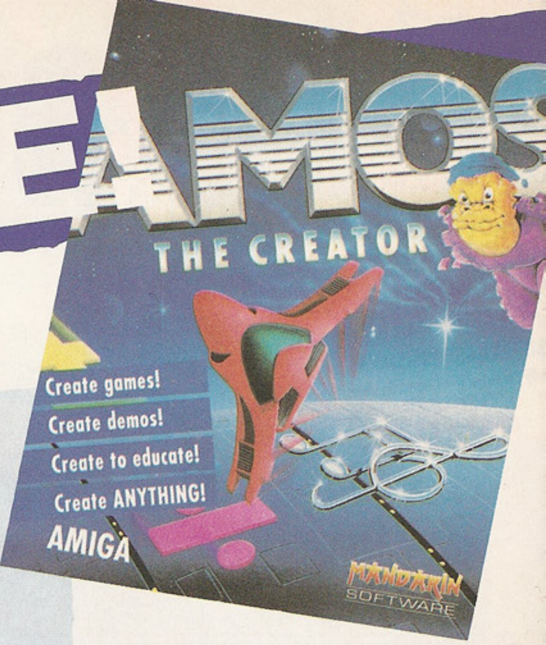
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"A must for Amiga users who would like to be able to develop their own games, but can't face the thought of learning machine code." ***ACE, August***

"An incredible product that should create more incredible products. It looks like the days of the machine-code programmer are numbered." ***Commodore User, August***

"Can AMOS be used to produce commercial-quality games? The answer seems undoubtedly 'Yes'. No other language will let you do so much with so little effort. For producing programs that need to use ultra-fast graphics and animation, super-smooth scrolling and scintillating sound, there is only one choice... and it's name is AMOS" ***Amiga Format, August***

What AMOS owners say:

"Completely brilliant – far better than I ever imagined possible – I absolutely love it" ***Liam Murphy, Colne***

"Just bloody great... Simply no other software of this class available for the Amiga or PC" ***Simon Nicoll, Blandford***

"AMOS is perfect. The Amiga was made for AMOS" ***K Sumpter, Swindon***

"A very impressive package – without doubt the very best Basic available on the Amiga. Incredible graphics manipulation commands" ***Paul Feazey, Oxford***

"Brilliant! I've done more with AMOS in four days than with HiSoft Basic in six months!" ***JR Arkley, Woolton***

"The best value for money package I have ever bought for the Amiga. I really feel that you want me to enjoy using the language." ***Colin Mercer, Bolton***

"On par to be the best Basic language ever." ***S Hawkes, West Bromwich***

"Endless possibilities and uses. Congratulations!" ***Michael Fletcher, Mold***

"Excellent! Amazing! Brilliant! Superlative! etc etc... I love the commands and ease of use. I understand now why AMOS is called The Creator" ***DM Richmond, Blackpool***

"This is going to be the best selling package on the Amiga! It will allow my ideas to come to life" ***David Linacre, Chesterfield***

"AMOS is very fast, friendly and no doubt about it, the best program for the Amiga!!" ***David Harrigan, Derry***

"As a previous STOS user I can't fault it. Brilliant! François does it again!!!" ***Neil Burton, Tidworth***

"Excellent. The speed for a Basic is breathtaking" ***Delwyn Farr, Dukinfield***

"Simply awesome – the most impressive piece of coding I have ever seen!" ***M Rackley, Stone***

"An excellent job! AMOS is faster than I'd ever dreamed possible!" ***David Milton, Welwyn Garden City***

"An absolutely fantastic package that uses the Amiga to its full potential" ***NK Ball, Stoke-on-Trent***

"Everything I want to do with the Amiga can be done quickly and easily with AMOS" ***Stuart Margerison, Blackburn***

"Fantastic. I knocked up something in a day which would have taken a month in assembler" ***Gary Symons, Bournemouth***

"It's the best piece of software I've bought for the Amiga. Worth twice the price." ***SA Sweet, Herne Bay***

"AMOS will do for Amiga programming what the invention of fire did for civilisation" ***Kevin Smith, Marden***

"Looks set to be the most used piece of software ever on my Amiga" ***Martin Bruce, Croyden***

"The best thing that could have happened to the Amiga" ***Derek Bere, Fradley***

What AMOS owners are going to create:

"An educational program for motorists... a graphical role-playing game... a Star Trek game... a Mandelbrot explorer... database-type programs... a platform beat-'em-up like Barbarian... scientific programs... a boxing simulation... a conversion of Star Chess... conversions of old Spectrum classics... video titling software... an evolution simulator... printed circuit board designer... a football game... a Speedball-type game... a flight simulator... small business accounts... a cricket management game... a tactical wargame... producing plans of archaeological sites... home finance package... flashy scrolling demos – *and this is just the beginning!*"

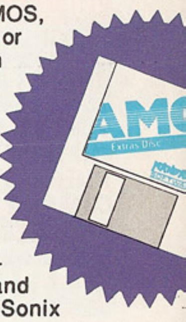
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ACCELERATION FOR ARTISTS

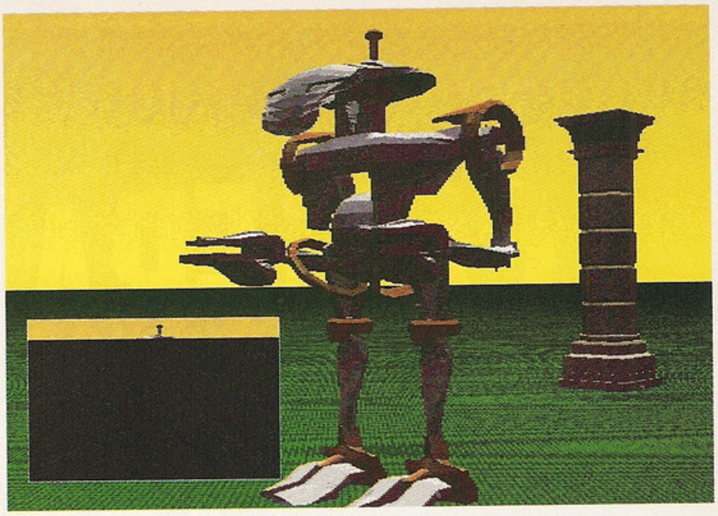


An in-depth investigation into the graphical benefits to be gained by using a faster processor is conducted by BRIAN LARKMAN.

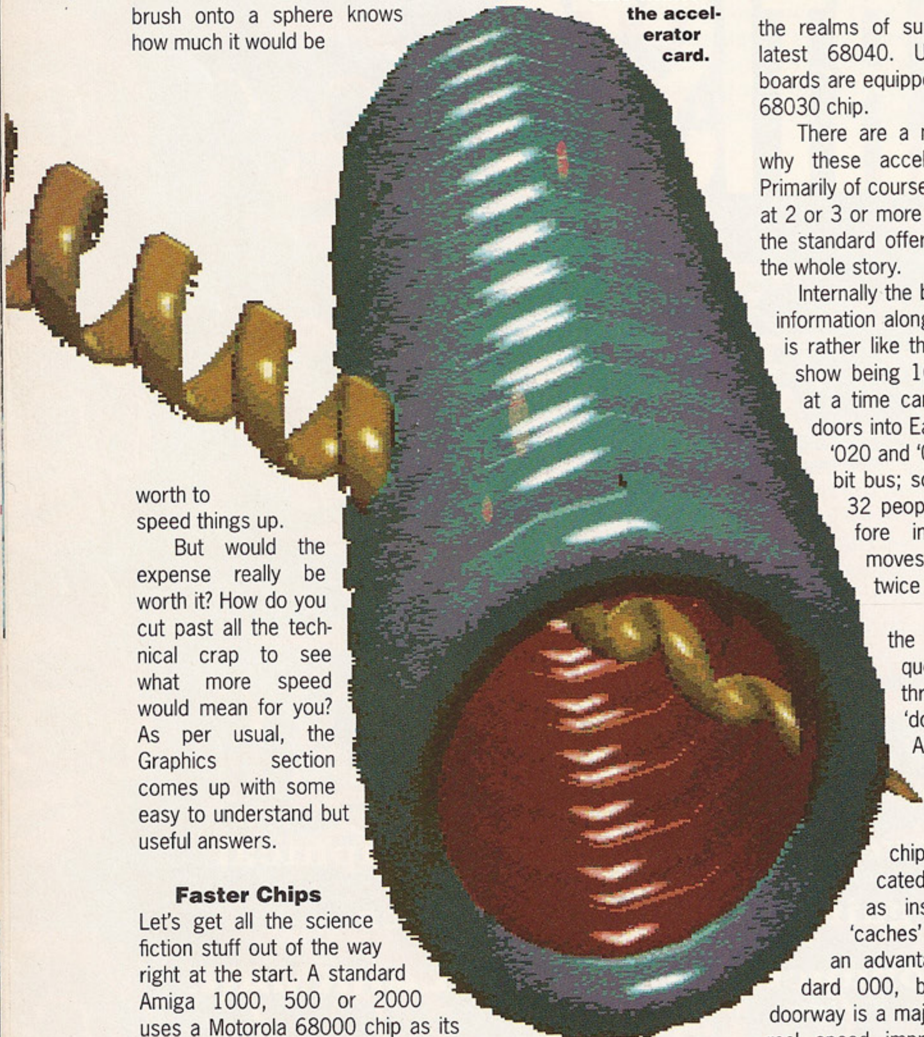
Floating Point Unit (no, don't go!) 16MHz (please, hear me out!) maths co-processor, 32-bit 16MHz MC68020 processor accelerator, Nseive, MandelTest, Savage/IEEE – yes I know, for the average graphics enthusiast, this is all a bit technical. But even though the 'Turbo Power Tech-Spec' stuff that always seems to accompany reviews of accelerator cards goes over my head sometimes, the basic principle of speeding up the operation of the Amiga for graphics applications is very important.

Anyone who has watched their reflection on the blank screen visibly age while waiting for a ray-trace to render or for Photon Paint to wrap a brush onto a sphere knows how much it would be worth to speed things up.

But would the expense really be worth it? How do you cut past all the technical crap to see what more speed would mean for you? As per usual, the Graphics section comes up with some easy to understand but useful answers.



Microbot was produced using Sculpt-Animate 4D from Byte By Byte. The objects all came from the Antic Design Disk library. It is rendered in snapshot mode, non-interlace because most of the Antic models use a large number of faces. Therefore, even with the new 1Meg Agnes chip, there is not enough chip memory to render in Interlace Photo mode; a great pity. The full-size image represents the fastest accelerated fill. The inset represents the amount of fill that was achieved in a similar time without the accelerator card.



Faster Chips

Let's get all the science fiction stuff out of the way right at the start. A standard Amiga 1000, 500 or 2000 uses a Motorola 68000 chip as its basic workhorse. The 68000 runs at 7.14 Megahertz, over 7 million cycles per second, which seems pretty fast until you start to render a reflective object! To get more speed requires a different processor chip and it is at this point that the range of options starts to get confusing.

Since introducing the 68000, Motorola have released a number of faster chips with various capabilities: a 14MHz 68000, a 68010 that is only a marginal improvement and so is rarely used for the Amiga, a 68020 running at about 16 MHz, a 68030 that can operate at up to 33MHz (if you like fried chips!) and, almost in the realms of super-computing, the latest 68040. Usually accelerator boards are equipped with a 68020 or 68030 chip.

There are a number of reasons why these accelerate the Amiga. Primarily of course they are operating at 2 or 3 or more times the speed of the standard offering, but this is not the whole story.

Internally the basic Amiga passes information along a 16-bit bus. This is rather like the queue for a CES show being 16 deep; 16 people at a time can pass through the doors into Earl's Court. Both the '020 and '030 chips use a 32-bit bus; so here the queue is 32 people deep, and therefore internally the data moves approximately twice as fast.

Unfortunately, the fast moving 32-bit queue still has to pass through the 16-bit 'doorway' of the main Amiga board so the speed advantage is largely lost. The '020 and '030 chips do have sophisticated internal tricks such as instruction and data 'caches' that still give them an advantage over the standard 000, but the 16-bit-wide doorway is a major bottleneck. For real speed improvements all or most of the data 'pathways' also need to be 32-bit.

Shadows and Floats

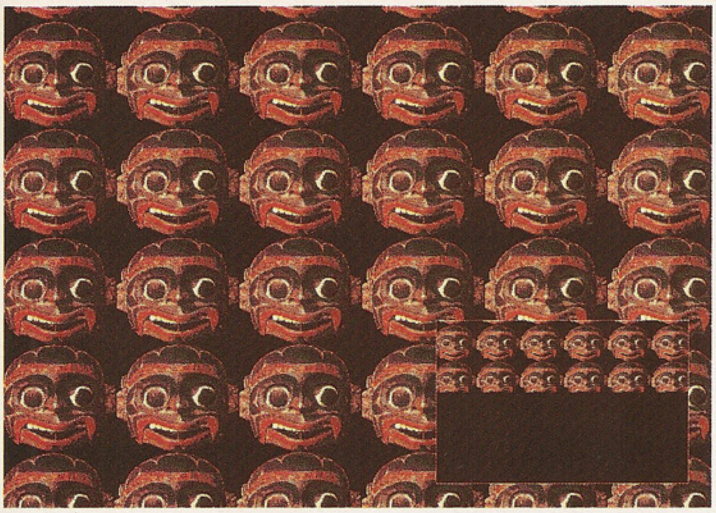
Even without a full 32-bit Amiga such as the A3000, it is still possible produce an almost 32-bit system by adding 32-bit memory to the accelerator card. Now, most calculations will take place there instead of in the normal 16-bit memory that we usually use. Further, as many of the Intuition operations that most programs use are controlled by the instructions on the Kickstart ROM, copying this onto the 32-bit memory will utilise the fast chips even more so. This is called ROM Shadowing.

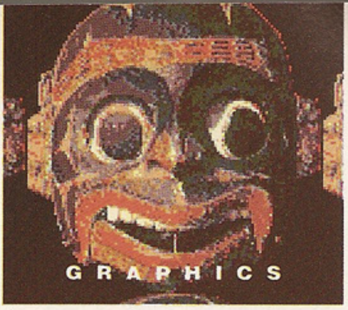
Some programs – CAD, 3D rendering and animation – are very heavy users of a particular mathematical process called Floating Point Operation. When carried out in software, all of the 68xxx chips are quite slow at these operations, but Motorola produce 68881 and 68882 Floating Point Unit chips (FPUs) that perform the calculations many times faster in hardware. Most accelerator cards have a socket built in so that an FPU or 'maths co-processor' can be added to them.

What Does it actually Mean?

To understand what all this technical jargon means to you as you are creating your images and animations, let us work through a series of tasks using a variety of software, describing the various configurations and their effects. When it is relevant other,







Digitised picture of an American Indian Mask from the NW Pacific coast. This image was reduced in size then used as a fill pattern in Deluxe Paint III. The full-size image represents the fastest accelerated fill. The inset represents the amount of fill that was achieved in a similar time without the accelerator card.

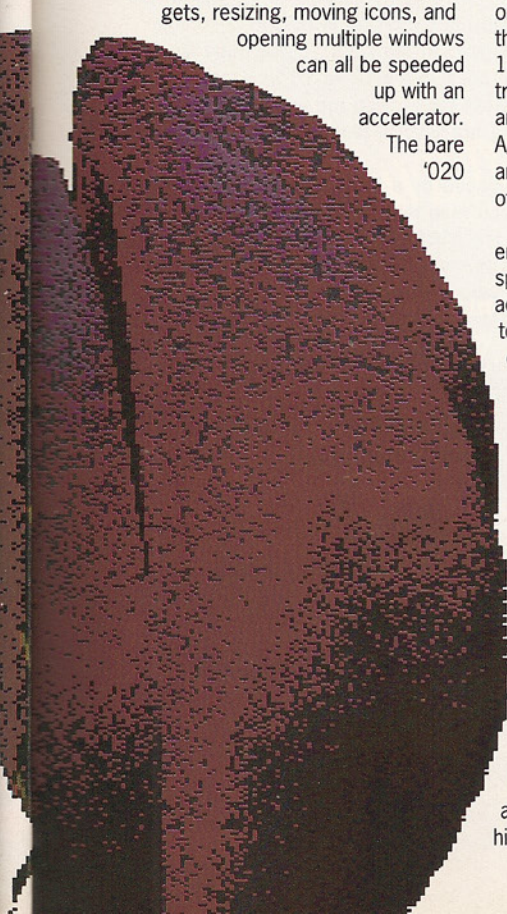
cheaper ways of speeding up operations will be described as well.

The Turn On

When you boot up your Amiga from floppy or hard drives, the speed of operation is dependent on the access rate of the device and the way that the data is stored. Hard drives are obviously faster, especially if the Fast File System (FFS) is used. This is not available for floppies yet but should be available with Workbench 2.0. Floppy accelerators like BAD rearrange the data on all sorts of disks to give faster access times. None of these strategies are improved greatly with any accelerator card.

Windows

Opening windows is similarly dependent on the data access rate, but once a window is open, using gadgets, resizing, moving icons, and opening multiple windows can all be speeded up with an accelerator. The bare '020 or '030 will make windowing operations slightly smoother, but it takes 32-bit RAM to produce a noticeable difference and copying Kickstart to this faster RAM (ROM Shadowing) will make a tremendous improvement to the overall usability of multiple windows, particularly when more than five or six are open at once. This improvement is obviously just as noticeable when using windows with a specific program. With the 20-Card set up as described below, a speed-up of more than three times was recorded with eleven medium-size windows open.



A Paint Program

As a typical 2D paint and animation program, Deluxe Paint III will be hardly affected by all but the most advanced acceleration. A faster chip – '020 or '030 – will improve everything a little, maybe between 10% – 50%, but most screen transformations and moves are controlled by the Agnes/blitter hardware which are strictly 16-bit on all machines other than the A3000.

Nevertheless, much of the general handling of the program is speeded up when 32-bit RAM is added and the Kickstart ROM copied to it. With this configuration, ordinary operations like pattern fills and more sophisticated actions like Brush Wrapping, perspective and animation are all accelerated by about 2.5 times.

Some of the more complex transformations might be helped by a Maths Co-processor (but this would require a special version of the software which is not available – so far! Deluxe Paint IV?) An equally great improvement to the productivity of the program is the replacement of the Agnes chip with the new 1Meg version. This allows longer animations, larger brushes and objects in all modes and the full use of all 16 colours in hi-res mode. A somewhat cheaper option than acceleration, but then both together would make Deluxe Paint really sing!

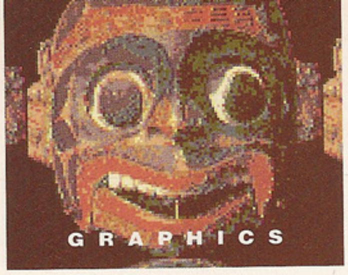


A HAM Paint Program

Most of the comments made above for Deluxe Paint apply equally well to HAM packages such as Photon Paint and DigiPaint but, certainly in the case of Photon Paint, the need for acceleration is very much greater. HAM painting has a number of peculiar characteristics that give it its power but can also slow down even very simple operations considerably.

Having 4000 colours to play with means that sophisticated graduated fills, shaded texture mapping and transparent effects are easy to achieve, but the calculations required obviously take some time.

NewTek have written all of DigiPaint 3 in machine code which has successfully speeded up the program even on normal, un-accelerated Amigas, to almost Deluxe Paint speeds without sacrificing any of the power of HAM mode. They have also



included routines that take advantage of an '020 processor if one is fitted and the timings and general smoothness of the program in use reflect this. The use of an '020 and FPU give a 50% improvement and ROM Shadowing increases that to times three, making DigiPaint a very fast paint program by any standards.

Most operations in Photon Paint are improved with the use of an accelerator, usually by about 50% with just an '020 and by perhaps three times if ROM Shadowing is used. The operation in Photon Paint that most needs speeding up is the Wrapping of brushes onto geometric shapes, and especially Contours. This last operation involves creating a pseudo contour map (the heights correspond to the brightness of the area mapped) and 'wrapping' a bitmapped image to these contours. The 3D effect can be enhanced by setting a light source to cast shadows.

The process of mapping is similar to ray-tracing in the intensity of the calculations required and would greatly benefit from the use of the FPU. Unfortunately the current version of Photon Paint is not optimised for a maths chip so no apparent speed-up is produced if an FPU is present.

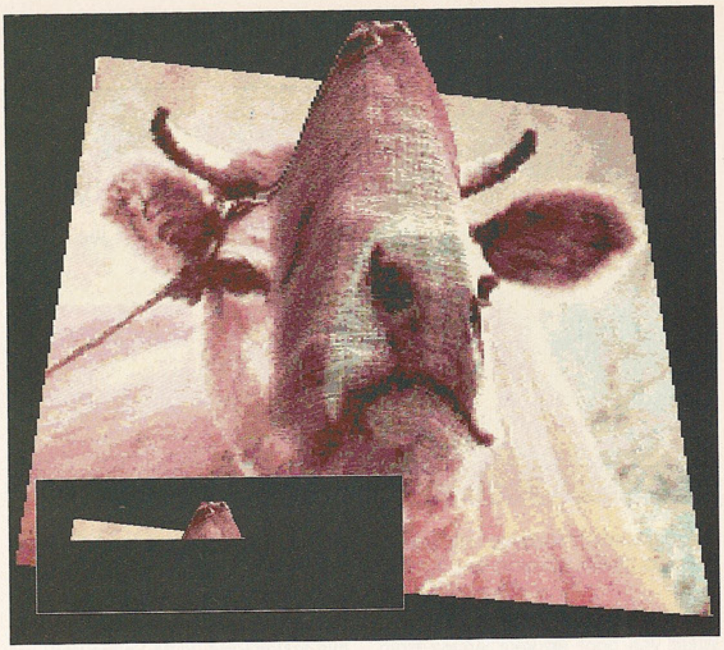
A 3D Modelling and Rendering Program

The real advantages of accelerator boards make themselves felt most when you are working in 3D. Building complex models and rendering them with ray-tracing methods is probably the most memory and speed intensive operation that anyone could undertake on an Amiga.

A 3D computer model is made up of points lines and faces that are stored as a list of coordinates. Each time the model is changed or moved, the list must be updated and the display – usually a wire-frame version of the object – must also be redrawn. The more complex the model, the longer this process becomes so that eventually the updating process can take several minutes making further work almost impossible. At this point speed rather than memory is the limiting factor to the size of the model.

As with a bitmapped paint program, a bare '020 only improves the speed by about 50%, but ROM Shadowing can make a real difference – times three or more performance increases are common. The processes involved in modelling do not seem to use Floating Point Operations; even with an FPU fitted and with optimised software, no significant increases in speed can be detected. This is not the case when rendering the model.

Rendering, especially ray-tracing, is a very maths intensive job and Floating Point operations are used extensively. With an '020, ROM Shadowing and a 68881 FPU chip (20-Card), rendering times almost eight times the 68000 equivalent were achieved. This can make an amazing difference to working with 3D models for it encourages experimenting, making tiny versions of pictures (in SA4D) render almost in real time, even with very complex models in Photo mode. Ultimately, this has to be the best reason for investing in an accelerator card.



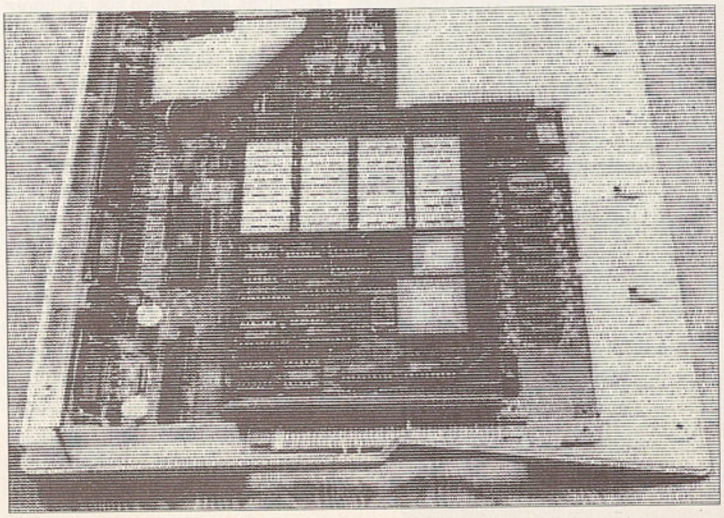
JerseyCow is a digitised picture that was mapped onto a contour produced by Photon Paint 2. The contour was based on a simple graduated Blend fill with the highlight near the top. This lighter area produced the highest peak of the contour map. The full-size image represents the fastest accelerated fill. The inset represents the amount of fill that was achieved in a similar time without the accelerator card.

OUR TEST PROCESSOR - THE 20-CARD

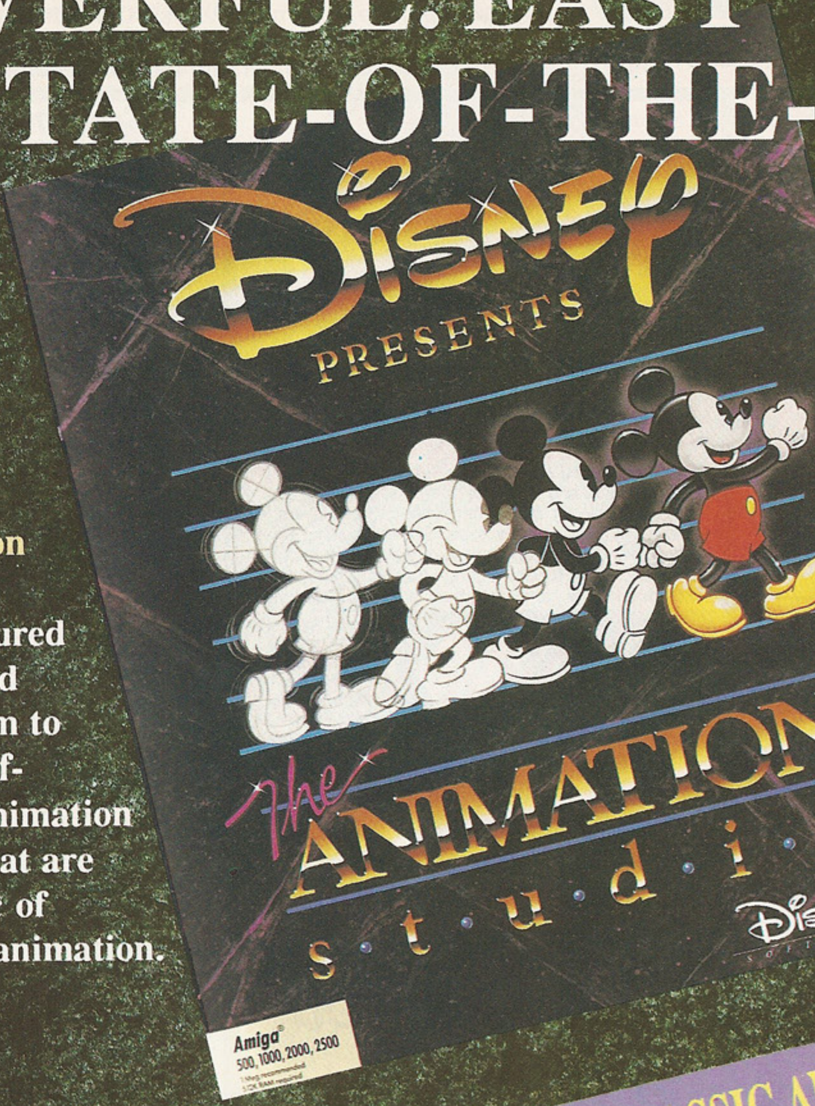
All of the experiments undertaken for this article used a 20-Card supplied by Solid State Leisure fitted with 16MHz 68020 and 68881 chips and 4Mb of 32-bit RAM. This board was originally designed to be fitted only to the Amiga A500, but fortuitously it will also fit an A2000 or B2000.

The board seems to work faultlessly in the A500, but it must be said that it crashed frequently (perhaps once every 10 to 15 minutes) in both my A and B 2000s. Solid State Leisure have given me every possible help in overcoming this problem, sending me several replacement cards, but to no avail – it still crashes.

The 20-Card is about to be replaced by a Series 3 version called the A5000 – it should be available as you read this. Solid State assure me that the A5000 will work perfectly with the A500 and the Amiga 2000 because this time it has been designed to. The new board has many extra features, including retaining the old 68000 chip on-board for games compatibility, greater efficiency and even more speed, but still at a budget price.



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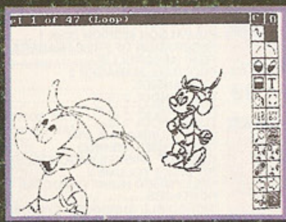
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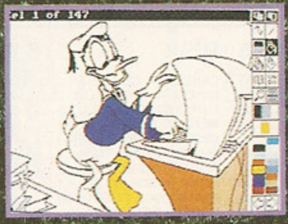
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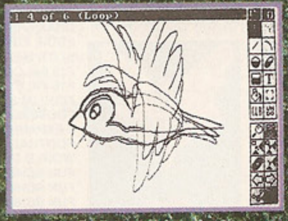
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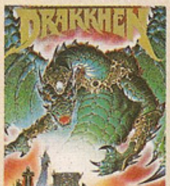
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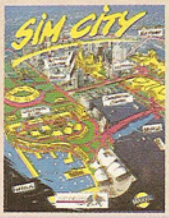
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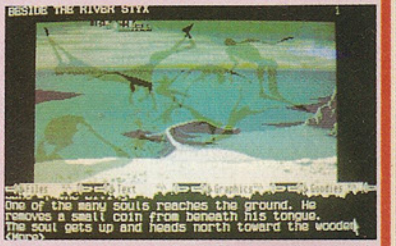


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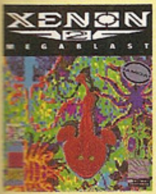
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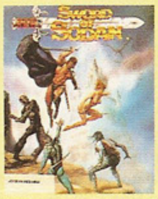


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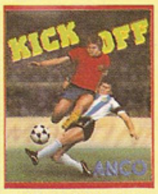


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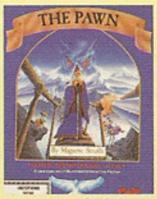
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TAKE THE Tablet

Graphics tablets offer greater control over precise drawing and more freedom to use natural artistic techniques, but not at a reasonable price – until now. A new tablet is road-tested by ADRIAN A CHROME.

There comes a time when many Amiga owners tire of the rather rudimentary mouse that comes with their machine and start looking in other directions for a way of getting their pointer from A to B (or should that be from X_1,Y_1 to X_2,Y_2). Among the many alternatives to the humble standard mouse are: the 'turbo mouse', à la Naksha mouse or the Boing! mouse, which is basically the same as the basic mouse but with bells and whistles; the Trackball, as reviewed in Issue 10, which is a big mouse turned on its back; and even the Mousestick, which tries to be both a mouse and a joystick and ends up not really being either.

But probably the ultimate in pointer drivers is the graphics tablet. Admittedly it takes up a lot more space on your work-surface than a mouse, but it does look a lot more impressive when you have your friends around for a game of *Kick Off*. Ostentation aside, it also has a trick or two up its sleeve that puts it in a territory far beyond the dreams of the basic Amiga mouse.

So why don't we all have one of these wonderful devices sitting next to our machines, I hear you ask? Well, when you consider that graphics tablets usually cost about as much as an A500 with an extra half-Meg expansion and an additional drive, the answer becomes self-apparent.

So when the Podscat/*AProDraw* package dropped on the *Format* doormat bearing a price more in line with an A250 (that's half as much as an A500, before you start writing in) we were intrigued.

Pen in Hand

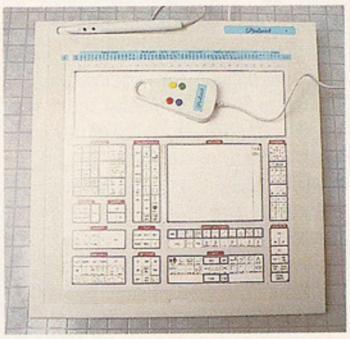
The package consists of a Summigraphics tablet, complete with a 'cursor', which is not dissimilar to a mouse, a 'stylus', which is a pen-like device, and software to dedicate the otherwise multi-format hardware to the Amiga. Summigraphics make similar tablets for a wide range of machines, so to this end there are various data transfer rates available on the "Set Up" section of the tablet surface, but the software on the disk precludes the need to worry about this since it automatically sets up the tablet to Amiga compatibility when run from the Workbench.

Double-clicking on the *AProDraw* icon will then switch control of the pointer from the mouse to whichever co-ordinate specifying device you have plugged into the tablet. The software also includes a scaling program which enables you to select the area of the screen or of the tablet which is to be used: the application of this feature will become apparent as we consider the tablet's major uses.

The software also allows you to program the buttons on the cursor and stylus to your own preferences, although they are set up quite logically enough by default. The cursor also offers a middle mouse button which is supported by Intuition but very rarely used by software, since the regular mouse is devoid of the third button.



ABOVE: The Podscat tablet along with the four-button cursor and the stylus.



ABOVE RIGHT: The markings on the surface of the tablet enable it to be set up to support several different machines and software packages. The icons remove the need to use pull-down menus, subject to software support.

Making a Point

The intended major use of the tablet is for digitising images for use in computer aided design programs. These programs take the coordinates of points in 3D space, and using fairly simple mathematical formulae enable one to see a perspective view of the object from any desired angle. All this is very nice until you consider that all the nodal points of the object have to be entered into the computer.

Even for a very simple 3D object like a cube, this is eight sets of coordinates: a total of twenty four numbers just to describe the most simple of objects. Can you even begin to imagine the amount of data you would have to type in to define an object like an F-16 jet fighter, or a girl juggling, for that matter? Quite mind-boggling, isn't it?

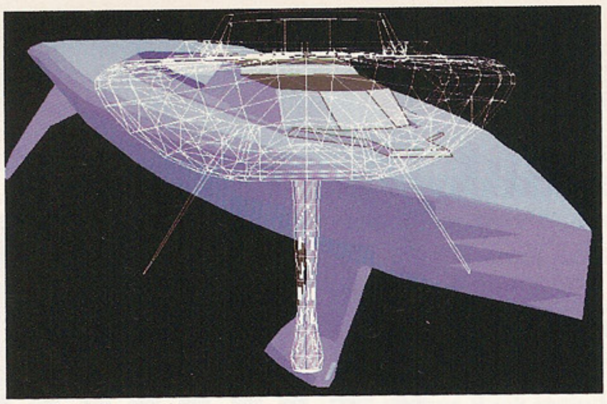
But the easy way out, if you know what the object that you're trying to turn into a computer-generated image looks like, is to take a technical drawing of the three principal views of the object and, using the graphics tablet, input them directly into the CAD package you are using. This operation can, of course, be done using a mouse, but the big advantage of the cursor on the graphics tablet is that rather than the point you are referring to being somewhere below the large lump of plastic in your hand, it is clearly visible below a crosshair sight etched into a clear plastic circle at the business end of the pointer.



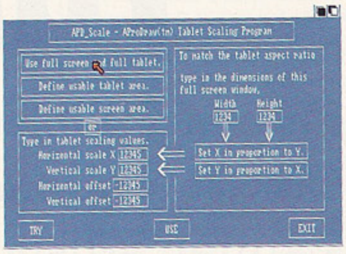
This means that accurate entry of data doesn't require you to pay feverish attention to the pointer coordinate display that most CAD programs feature. But therein lies the crux of the matter: most CAD programs *do* include information on the position of the pointer, making accurate rendering of the drawing possible (even though the mouse can be a bit on the arbitrary side at times), so why shell out much more for the tablet?

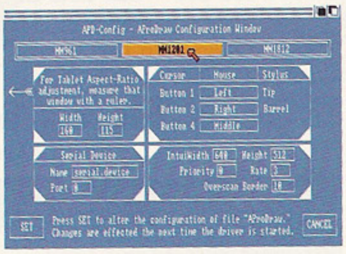
The answer to this has simply got to be the tablet's speed and accuracy. The fact that you can see what you are doing at all times precludes the need for referring to a numeric indicator, and makes digitising a simple matter. And because the tablet works by electromagnetic induction rather than a rolling ball, each point on the tablet represents a unique point on the screen. Whichever way the cursor is pointing, if you move it away from you the pointer will go towards the top of the screen: try that with your mouse!

One difficulty of tracing using a mouse is that the mouse must stay on the tracesheet at all times, and must remain in the same orientation relative to the plan. Should you have an original that is too big to fit on the surface of the tablet, by using the scaling function that is included in the software you can define the whole area of the tablet to relate to, say, a quarter of the screen, enabling large plans to be digitised.



ABOVE: The cursor is an excellent way of inputting point data to CAD programs.

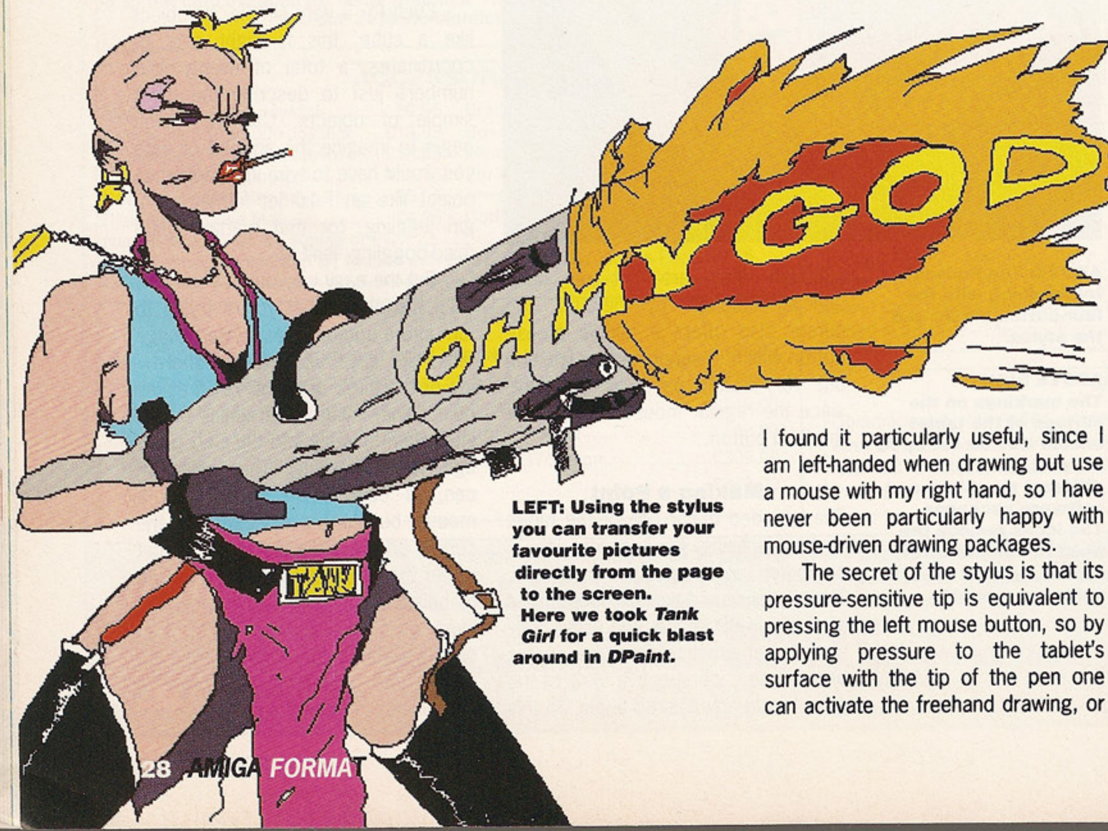




RIGHT: The scaling and configure screens enable you to set up the aspect ratio of the tablet area, define the areas of tablet and screen to use, and program the cursor and stylus buttons.

Natural Advantage

Unplugging the cursor and connecting the stylus changes the nature of the tablet completely. From being a data entry device, it becomes a very efficient way of interacting with the Amiga, particularly in art packages such as *DPaint*. The nature of the tool makes it very easy to use for freehand drawing because essentially it is just a pen which, when it comes down to it, we are all much more happy drawing with than a mouse.



LEFT: Using the stylus you can transfer your favourite pictures directly from the page to the screen. Here we took *Tank Girl* for a quick blast around in *DPaint*.

I found it particularly useful, since I am left-handed when drawing but use a mouse with my right hand, so I have never been particularly happy with mouse-driven drawing packages.

The secret of the stylus is that its pressure-sensitive tip is equivalent to pressing the left mouse button, so by applying pressure to the tablet's surface with the tip of the pen one can activate the freehand drawing, or circle creating, or many other tools of the popular art packages. The two buttons mounted on the body of the stylus equate to pressing the right mouse button or pressing both buttons respectively.

Because the tablet uses an electrical field to detect the position of the cursor or stylus, it works even when the tip is up to half an inch from the surface of the tablet, enabling one to trace material from books, magazines, or other originals: something which is virtually impossible to do with a mouse.

Success Ratio

When one first begins to use the tablet a few things become obvious immediately. Firstly, the ratio of cursor-to-pointer movement is very low at the default settings and the natural tendency when using the four-button cursor is to pick it up and back-track just as one would when using an ordinary mouse.

The only problem with this is that as soon as you plonk the thing back down on the tablet surface the pointer jumps to the point on screen that relates to the position on the tablet. This is a mite disconcerting at first, but you quickly get used to it.

If you intend to use the tablet for everyday window-opening operations, it is a simple matter to change the scaling of the tablet to allow the pointer to move further for a shorter physical travel of the cursor. Using the stylus for normal tasks is very simple, especially when used in conjunction with the scaling facility. The stylus really shows its strengths, though, when used in the manner of a brush or pen for freehand drawing, yet it loses none of the abilities of a mouse to operate such functions as fills, polygon drawing and the rest.

Conclusive

So now we come to the bit of the review where I'm supposed to tell you whether you should go out and buy one or not. I have to say that when I first started using the Podscat tablet I was not particularly impressed. Admittedly it is an excellent digitising device, but your bog-standard mouse is not all that bad when used with good software.

But then I began using the tablet-and-stylus combination with *DPaint* and quickly found myself enjoying computer graphics a whole lot more than I had for years. The unit is well constructed and will outlive the average mouse many times over. As a data entry device it is powerful and flexible. So should you buy one? Well, do you want one? I think I do.

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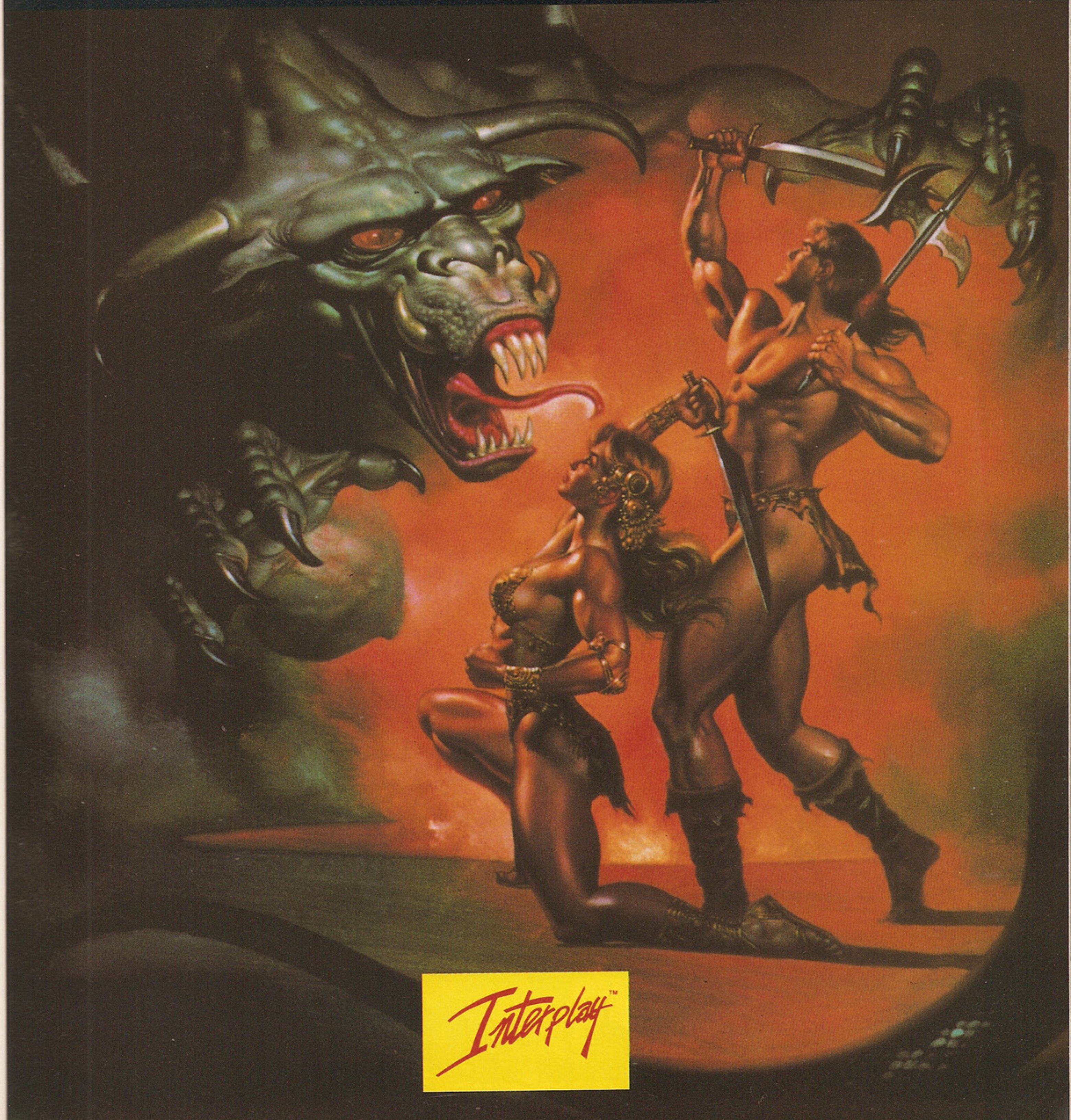
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Vroom WITH A Vista



The latest product from Virtual Reality Labs is Vista, a program to let you go where no living thing has gone before. Over to our fractal hacker, PHIL SOUTH.

Virtual Reality has come to be a bit of a buzz phrase over the last few months. Along with the language of cyberspace and cyberpunk literature, virtual reality is a couple of words that almost any cell phone toting technobore can flip out over dinner without a blink. And yet so few people actually understand what it all means.

Real worlds within the electronic fabric of a computer. Real landscapes that you can create and roam around, all seeming very solid, and yet the mountains and the trees only exist in the computer. No human eye has ever seen these sights before. And, like the synthesiser before it, fractal geometry will allow us to do landscapes what we did to sound, creating a mood or place that wasn't there before in nature.

A New Vista

A few weeks ago I happened across a fractal demo which showed a flight through a mountain range. The 'camera' flew through the trees and across the surface of the lakes so smoothly, it seemed like a jet was racing through the Rocky Mountains, and the thing was so real. But you could just about make out the jaggies, the fact that the mountains were made out of triangles. But the effect was amazing, and so it should be with about 300 frames of animation.

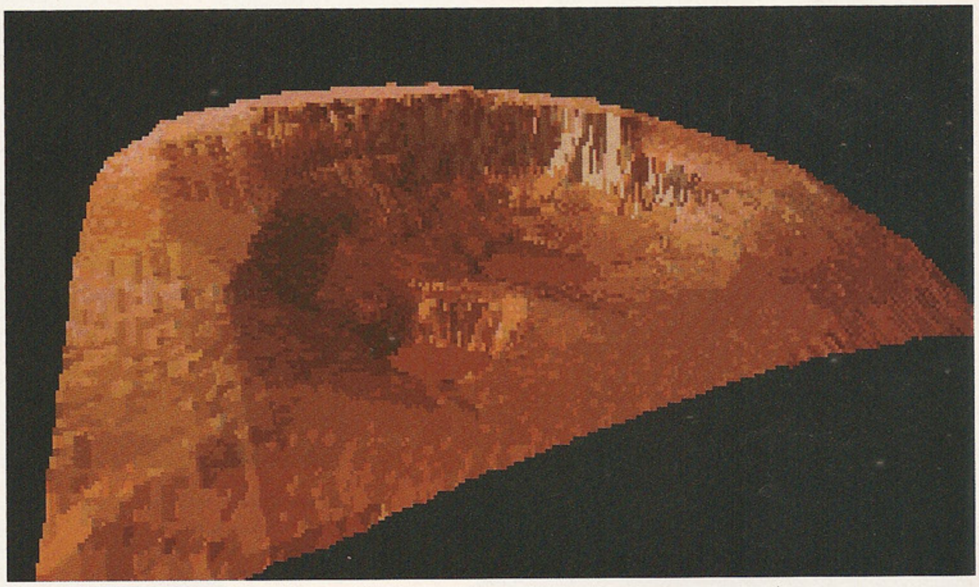
At the bottom of the screen the legend said that the program used was a forthcoming product, from a firm called Hypercube Engineering, but I'd forgotten all about it until *Vista* arrived. This was the forthcoming product mentioned in the demo. With *Vista* you can create and view fractal landscapes and even make animations moving through your own landscapes.

Looking Around

Vista is more than a fractal landscape engine, allowing you to create random landscapes at the touch of a button. Included in the package are files created from US Geological Society Digital Elevation Model files, a digital representation of the various heights in an area of land.

About 40% of the USA and various astronomical bodies have been converted into DEM files, and eventually all of these files will be made available to *Vista* users. These DEM files are turned into *Vista* format by Virtual Reality, which means you can load in a real landscape and walk around it. Supplied on the disk are DEM files for:

- El Capitan in the Yosemite Valley, California
- The Half Dome formation, again at Yosemite
- Crater Lake, Oregon
- Mount St Helens, Washington (Before and After)
- Olympus Mons, Mars







The files cover some of the most stunning views in the US and Olympus Mons is a view of the biggest volcano in the Solar System, on Mars.

The files cover some of the most stunning views in the US and Olympus Mons is a view of the biggest volcano in the Solar System, on Mars. One very interesting feature is the view of Mount St Helens, before and after the famous eruption of 1980. This is a great idea, this packaging of famous landscapes for the computer, and I hope they get a few more data disks out a bit sharpish, as I've already used up the first lot!

Making Mountains

After you've loaded up all the DEM files, you can start to create your own. All you have to do is either hit the F button at the bottom of the screen. Or you can type in a number



to make the scape. I tried my birthday, which in numbers is 100360, in case you want to tap it in yourself (or send me a card). This created a nice little atoll which you can see in the accompanying pictures.

Once you have a landscape, you can save the data as a .scape file, or even a file for use in *Turbo Silver*. Obviously if you want to save a huge mountain range into *Silver* and render it, you have to have a large amount of memory available, so watch it.

After you've got the mountain you want, you can smooth out the contours for a nice even landscape, or exaggerate them to make it spiky. You can also change the colour, which in the case of Olympus Mons is red, red, red or red.

For normal scapes you can make the grass and tree lines green, the rocks beige and the snow white, for a natural-looking landscape. But if you're feeling silly, you can colour the scape any range of psychedelic hues you wish. (You sicko). As well as using shades for the earth and sea/lakes, the program shades them a little too, to give the impression of reflections in the water and even haze on the horizon.



New Clear Resolutions

There are four different resolutions you can render at using the program, lower resolutions with size 8 or 4 polygons, and higher 'finished' resolutions with size 2 or 1 polygons. The difference can be seen in the four pictures of my birthdate atoll.

Other neat features are really odd things like the fractal music you can play while rendering. This music is a musical version of the values of the polygons being used to make the picture. These Californians, don't you just love 'em?

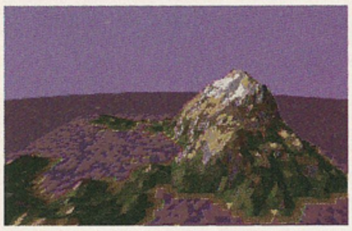
The propellor-heads among you will probably like to know that the program features 4 billion different fractal landscapes for you to discover. Just tap in all the numbers you can think of and there you have it. When you've done that you should be very old indeed. What else?

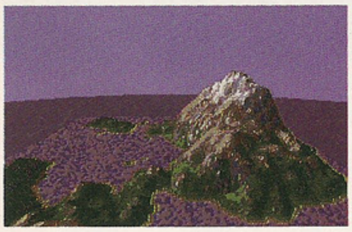
Although the program displays pictures in 320 x 200 pixel HAM mode, the pictures are defined internally as 24 bit pictures with 16 million colours. There may be some way of getting these high definition images out of the program and onto a 24 bit graphics card, but the documentation or menus don't say anything about it. Perhaps this is an additional feature offered by a forthcoming professional version of *Vista*? Let's wait and see.

Sunset Over Grand Canyon

Well, I'm really very impressed with *Vista*. It's fast, flexible and fun, the 3 Fs. And best of all it's currently number one in a field of one. The Brett Casebolt program based on his PD program *Scenery* is yet to see the light of day, and *Genesis* from Microlllusions is late too, in spite of being finished some months ago. But in any case I've seen both of those programs, and frankly *Vista* is easier to use, more impressive to look at, and faster too. (And that's fractals, not franklies.) So if you want to draw fractal mountains, take a gorgeous picture of your very own birthday island, or just take an imaginary stroll on the surface of Mars, *Vista* is the only way to fly.



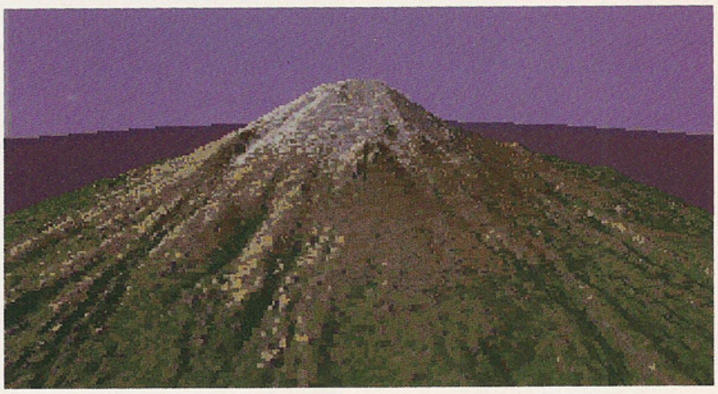






HAPPY BIRTHDAY TO ME Here are four pictures rendered at the four different polygon levels, 8, 4, 2, and 1. The atoll was made using my birthday as a seed value, so it's called Birthday Atoll. Any number will do. You phone number, your age, your credit card number, the length of your... (That's enough length - Ed).

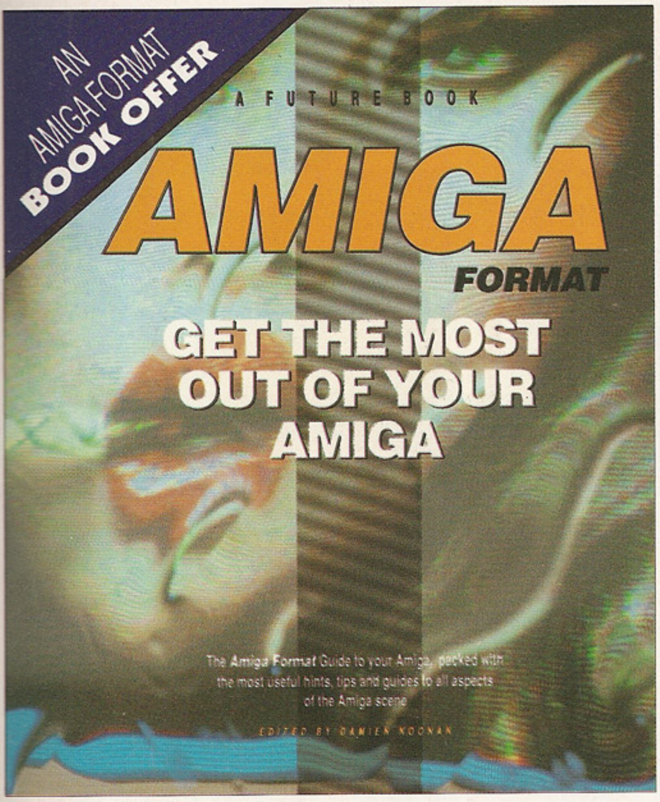
BEFORE AND AFTER



Mount St Helens, a long-dormant volcano in Washington, erupted on May 18th 1980. The explosive eruption was preceded by intense earthquake activity, whereupon a 150-metre bulge appeared in the side of the mountain. This bulge grew at a scary rate of five metres per day. Then an earthquake tipping 5.1 on the Richter scale burst open the side of the mountain, flattening everything in an eight-mile radius with a blast of 670 miles per hour. Trees were flattened up to 19 miles away, and the famous volcanic ash fallout covered a wide area of the US, settling up to 1000 miles away and darkening the skies for as much as a week after. Some people in the world got a brilliant sunset out of it. Some people just got a garden that looked like the moon.




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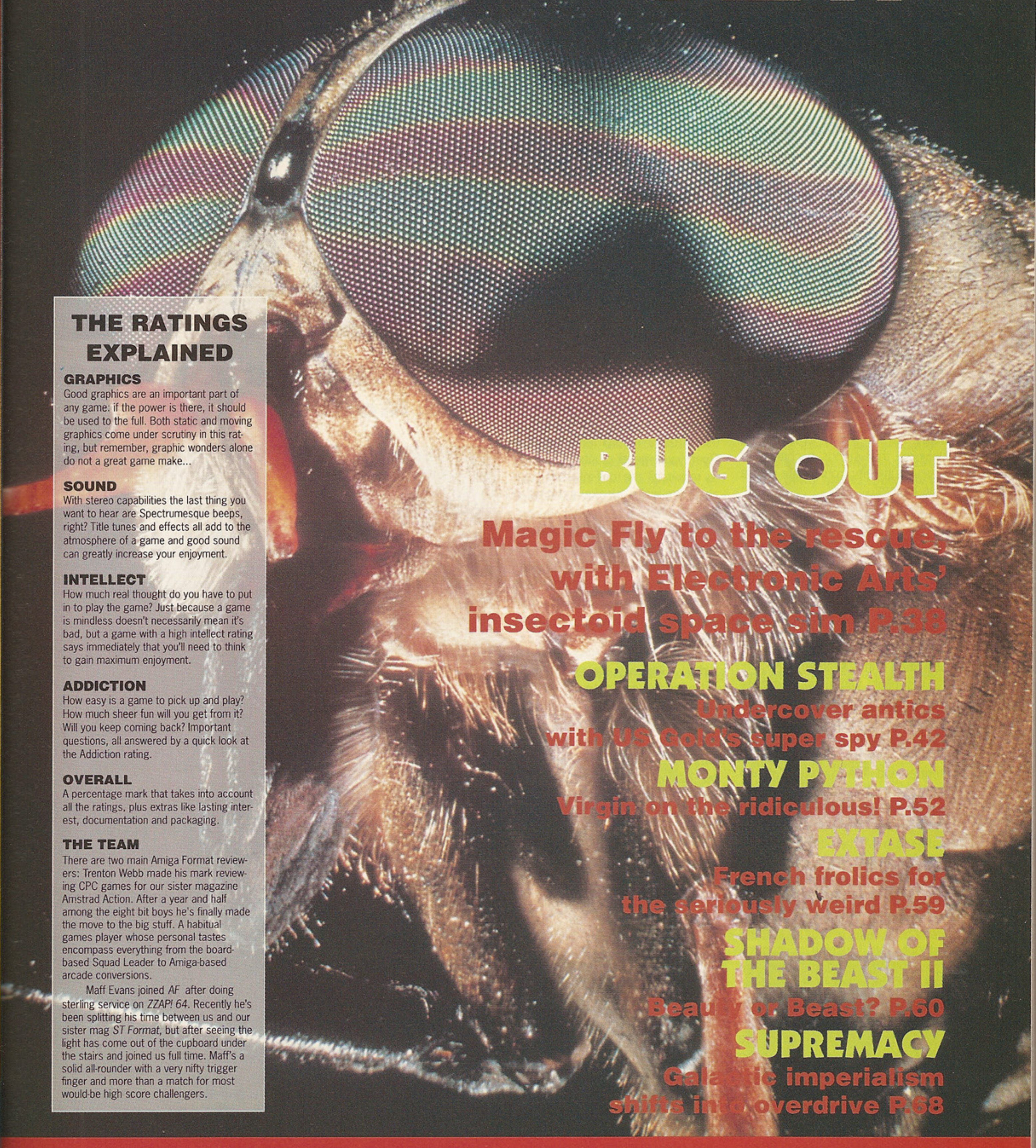
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SCREEN PLAY



THE RATINGS EXPLAINED

GRAPHICS
Good graphics are an important part of any game: if the power is there, it should be used to the full. Both static and moving graphics come under scrutiny in this rating, but remember, graphic wonders alone do not a great game make...

SOUND
With stereo capabilities the last thing you want to hear are Spectrumesque beeps, right? Title tunes and effects all add to the atmosphere of a game and good sound can greatly increase your enjoyment.

INTELLECT
How much real thought do you have to put in to play the game? Just because a game is mindless doesn't necessarily mean it's bad, but a game with a high intellect rating says immediately that you'll need to think to gain maximum enjoyment.

ADDICTION
How easy is a game to pick up and play? How much sheer fun will you get from it? Will you keep coming back? Important questions, all answered by a quick look at the Addiction rating.

OVERALL
A percentage mark that takes into account all the ratings, plus extras like lasting interest, documentation and packaging.

THE TEAM
There are two main Amiga Format reviewers: Trenton Webb made his mark reviewing CPC games for our sister magazine Amstrad Action. After a year and half among the eight bit boys he's finally made the move to the big stuff. A habitual games player whose personal tastes encompass everything from the board-based Squad Leader to Amiga-based arcade conversions.

Maff Evans joined *AF* after doing sterling service on *ZZAP! 64*. Recently he's been splitting his time between us and our sister mag *ST Format*, but after seeing the light has come out of the cupboard under the stairs and joined us full time. Maff's a solid all-rounder with a very nifty trigger finger and more than a match for most would-be high score challengers.

BUG OUT
Magic Fly to the rescue, with Electronic Arts' insectoid space sim P.38

OPERATION STEALTH
Undercover antics with US Gold's super spy P.42

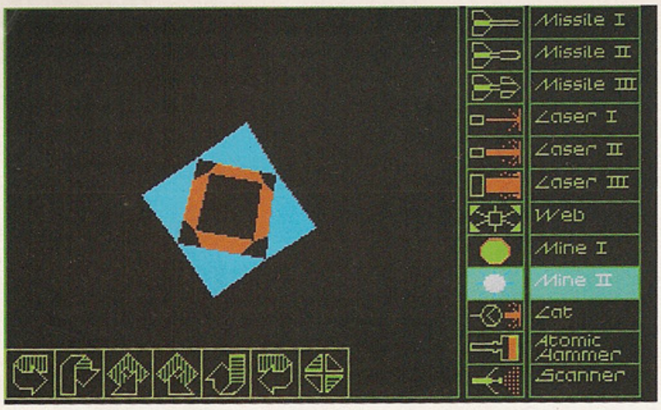
MONTY PYTHON
Virgin on the ridiculous! P.52

EXTASE
French frolics for the seriously weird P.59

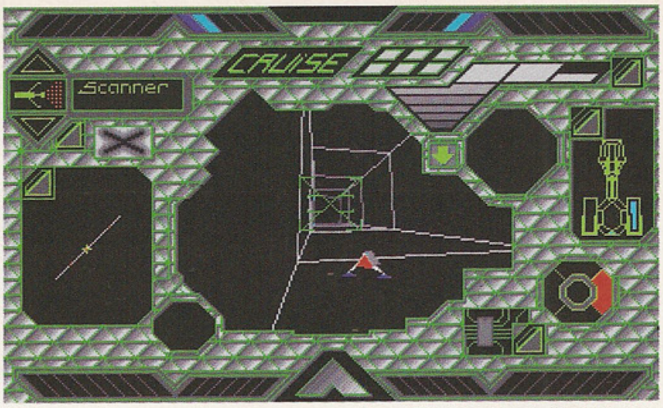
SHADOW OF THE BEAST II
Beauty or Beast? P.60

SUPREMACY
Galactic imperialism shifts into overdrive P.68

TIE BREAK P.44 ■ PLOTTING P.76 ■ TIME MACHINE P.75 ■ VENUS P.41



Mine's a large one! Mine II is one of the more unpleasnat surprises you can leave in your wake for the Triad to find. This screen is used for weapons familiariastion, all can be viewed from any angle.



While travlling near the entrance another ship is spotted. Scan it for the database which will then be able to give the low down on the ship, its capabilities, its armour and weapons.

MAGIC

ELECTRONIC ARTS £24.
and Mouse

Vietnam made tunnel rats famous, now Electronic Arts aim to give tunnel flies the same exposure. The fly in question is a Magic Fly, the only craft in the Universe that stands a chance of saving humanity from a fate worse than Vapona.

Deep within a disused mining planet, the Ceti Triad has gathered an army of inconceivable magnitude. It must be destroyed, but first information must be gathered about the spec of the Triad's Moth fighter. No easy task when the mines run for miles and the heavily-armoured Fly guzzles fuel like Olly Reed drinks shandy.

As pilot, you must negotiate the maze of tunnels, scan every enemy craft and neutralise the communications centre, the planet's reactor, the computer centre and the missile defence system. A simple job in comparison to the task of getting out of the complex once you've triggered nukes to trash the place!

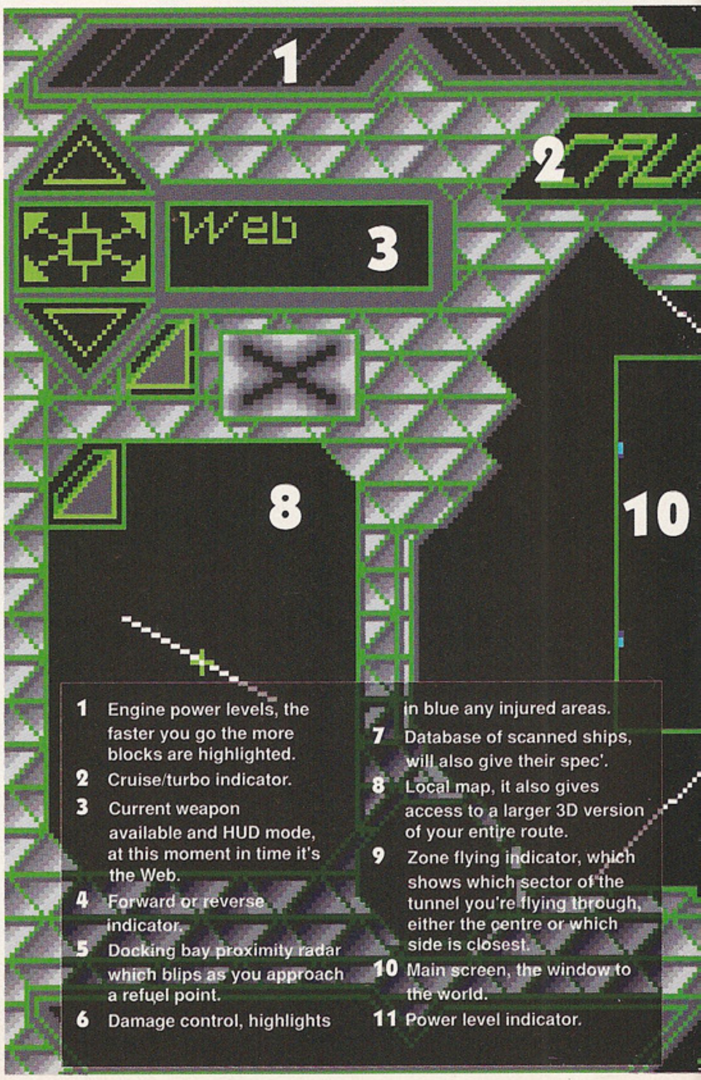
The Magic Fly's as easy to pilot as it is to crash in the tunnels of planetoid of LB-400-21. 'Zone flying' the Fly automatically steers away from walls and turns corners without you touching a control. Manual flying's needed to steer the ship past obstacles or to catch an enemy. The joystick controls the ship's speed and rotation, while mouse-driven HUD systems are employed for steering, shooting and scanning.

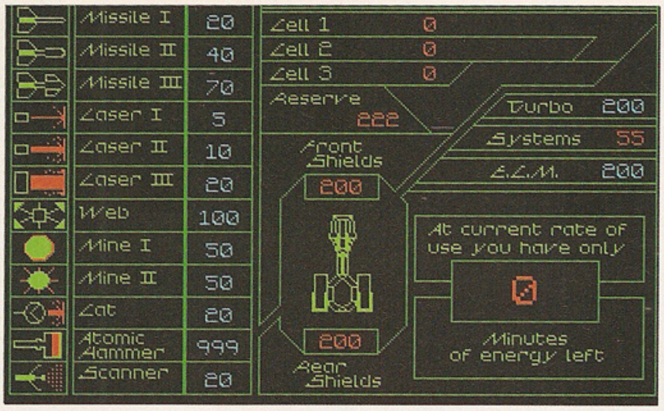
The need for power drives the game. Dotted throughout the complex are recharge docking bays which you drop into for a top up – it also serves as a game save point. Unfortunately they're miles apart, so cautious flying is needed to avoid damage and excessive use of the weapons. And as a new Flyer you'll need plenty of energy to repair all the self-inflicted damage from walls, blocks and craft in the labyrinth.

Flying while shooting or scanning is a basic skill fly guys need. Trolling around on auto's okay, but is ineffective and boring. True fliers blast along using the HUD cursor to identify or kill opponents, as well as steer.

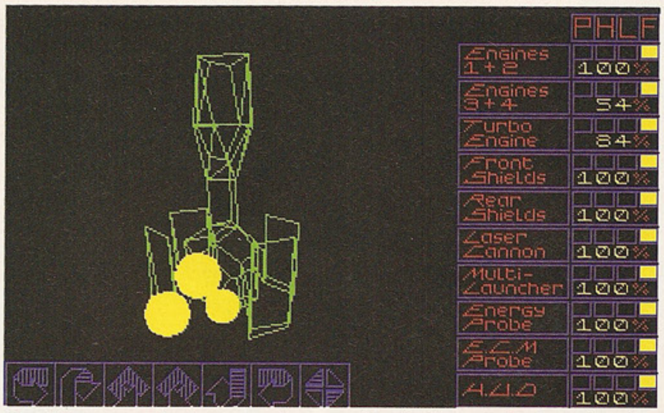
The Fly's big secret is the turbo. Like any good go-faster extra it's fun and potentially lethal. Hit the button and a countdown flashes. After five seconds you're hurled down the tunnels at a ridiculous rate, escaping any pursuant but risking massive damage. The turbo not only takes five seconds to activate but needs five to disengage! Not much fun when a door looms, because if you can see it you've hit it!

Starting slowly, *Magic Fly* builds into an absorbing challenge. Piloting the ship on manual becomes increasingly difficult as the enemies multiply and the tunnels get more complex. It's like a flight sim played indoors: pilots need patience and courage to choose the right route and survive. Will you blast or scan an opponent? Which way now? Do you run back to a fuel stop or head on, hoping? Questions which will determine the fate of the Fly in one huge web of tunnels that seek to ensnare and kill.





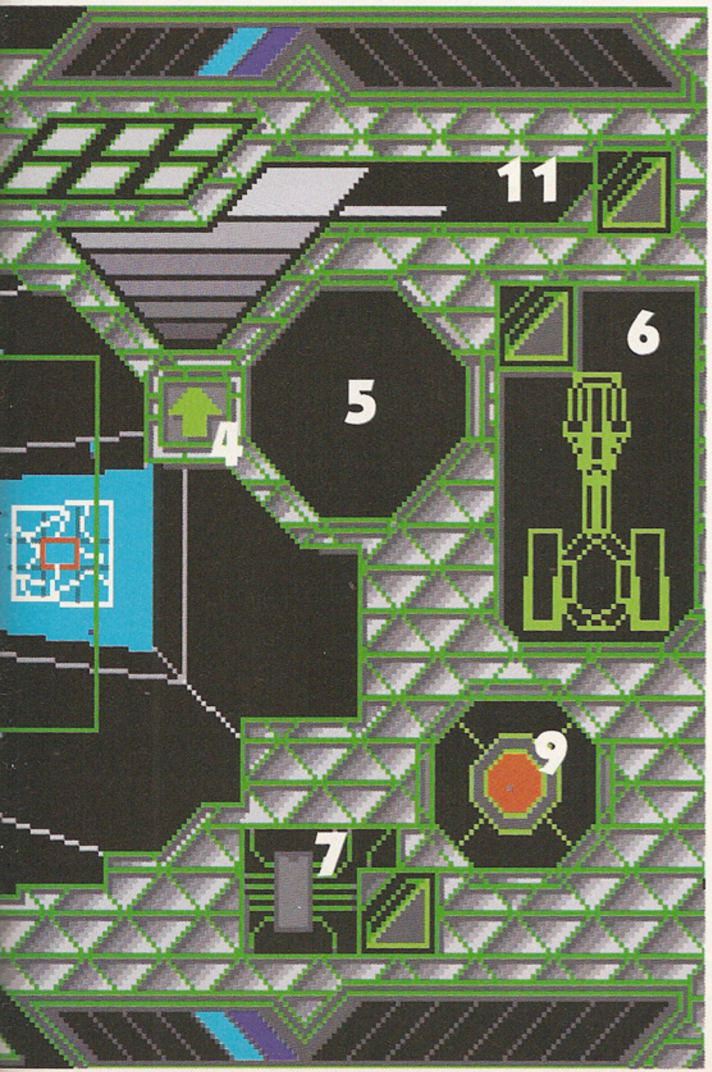
The Magic Fly hits big trouble, no power! If it had any left the tables show the cost of employing each function. The weapons are on the left, the vital systems on the right.



The damage control screen gives you the bad news. Engines 3 and 4 have suffered collision damage and so has the turbo. How are you going to impress the girls without the go faster goodies!

FLY

Joystick, Keyboard



GRAPHICS AND SOUND

Wireframe 3D ain't the hottest concept on the gaming front but it's never been used so effectively. The 3D map takes masses of getting used to, but it's an invaluable aid to navigation. Rotating images of scanned enemy ships gives you the chance of recognising what dangers they hold from a distance.

The variety and flexibility of screens is impressive. They allow pilots to choose between two main flight screens with keypress shortcuts for the information tables. While only wireframe, the smoothness and the speed of the corridors leaves nothing to the imagination, just the way it should be.

It is sonically underwhelming, so good pilots may hear little for hours. Bad pilots, on the other hand, hear the sound of their ship scraping the walls time and time again, an effect which soon induces nervous overreaction as you desperately pull away from collision.

LASTING INTEREST

Magic Fly is a lasting game. It has limited instant appeal, it's awkward to control and builds slowly in pace. Once the library of saved games starts to grow, its appeal grows too. Thousands of different routes demand exploration, the enemy grows in menace the deeper you reach and each enemy is a challenge to scan and shoot. As the arsenal on board the craft grows, then so too does its potential. When the ship is at full power, then and only then will you find the Moth and complete the mission.

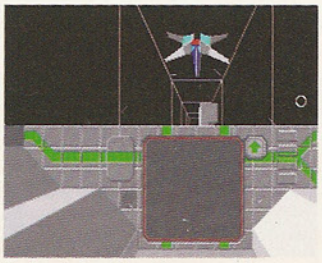
JUDGEMENT

Magic Fly has a quiet charm. Its magnitude as a game is only appreciated after you've tried and died a few times. To begin with any pilots are more dangerous to themselves than the Ceti Triad, yet with a little practice the balance shifts. You'll know when to use the auto pilot and when to fly yourself, and more importantly how to reach the all-important docking bays for a refuel. Then the game switches from being an interesting 3D coding exercise into an immense challenge.

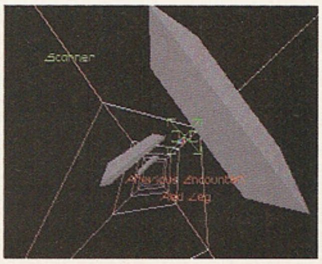
An indoor flight sim, it is never really exciting in the shoot-em-up sense. Instead it supplies tension as you negotiate the twisting tunnels destroying yet more insect-like craft. The Triads will be safe for a long time in their subterranean retreat, but one day their defences will be yours to plunder. It's a day worth working and waiting for.

Trenton Webb

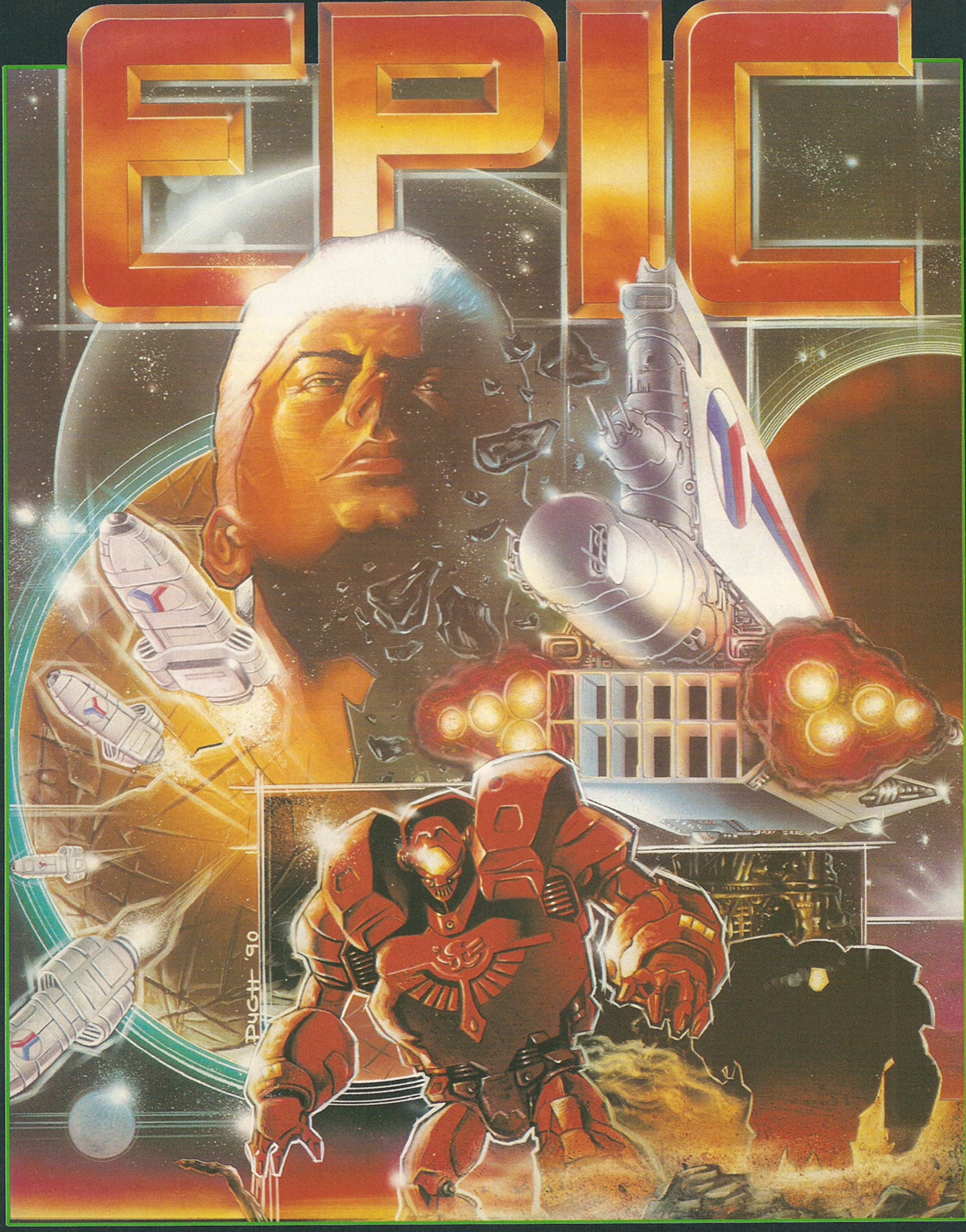
GRAPHICS	8
SOUND	3
INTELLECT	9
ADDICTION	7
OVERALL	88%



Safe. A docking bay provides more energy and a 'save' point



Scanning on the move can prove dangerous, due to crashes.



EPIC - A LEGEND BEYOND TIME

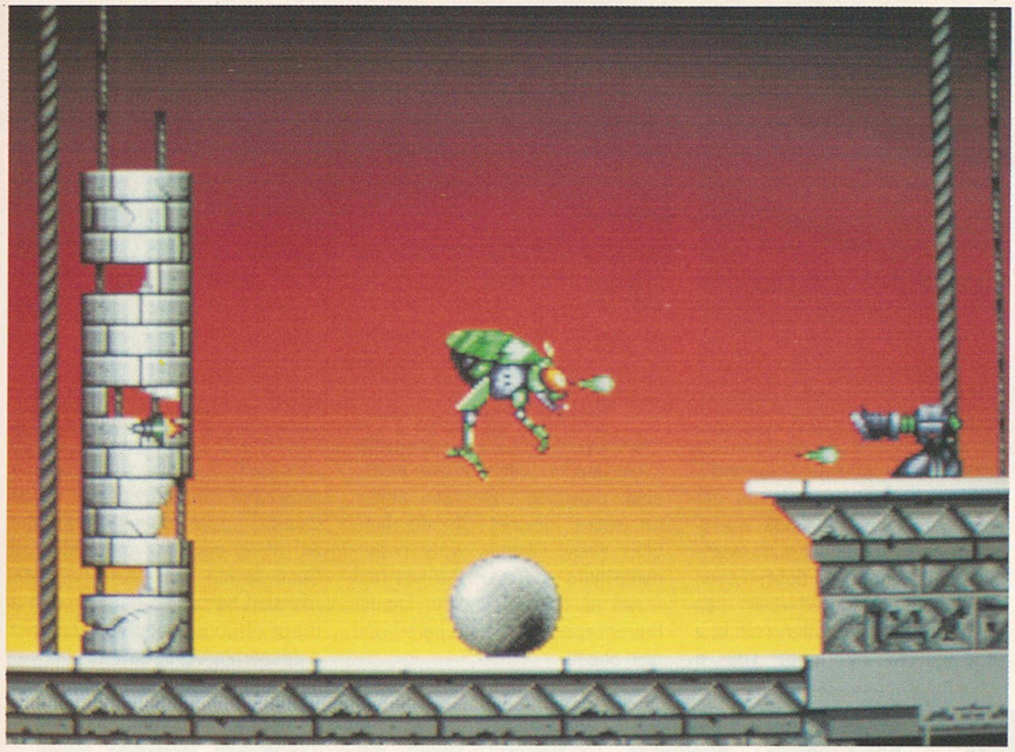
From the development team which brought you F29 Retaliator now emerges **EPIC** - a sci-fi extravaganza featuring spectacular graphics and stunning game-play.

ocean

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Using your normal weapon, tackling the big insect-guns is hard work. They pop out of the floor so fast you have to get right in the line of fire to hit 'em!

VENUS the FLYTRAP



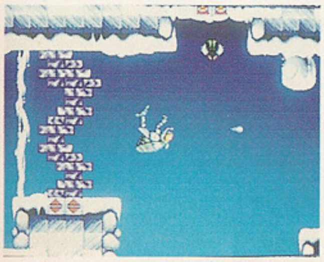
GREMLIN GRAPHICS £19.99 ■ Joystick

The overuse of pesticides and intensive farming has caused a breakdown in the ecosystem, killing off all the insects. To restore balance, the scientists create new breeds of cyber-insects, using hastily-learnt genetic engineering techniques. Predictably, a DNA fault in the creatures causes them to go mad and swarms of killer insects wreak havoc on the planet.

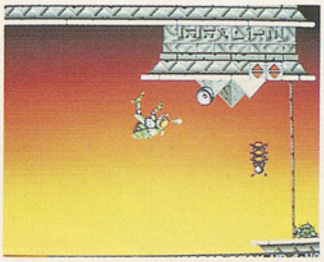
Total disaster can only be prevented by a single, special insect: Venus, The Fly Trap. You guide this insect equivalent of Robocop through the ten areas of the game, which include the Forbidden Forest, Wood World, Death Valley and the Stygian Creek. Your task is to walk Venus along left-scrolling scenery leaping chasms, dodging or killing insects and picking up bonus items. There are many of these, some of which give you multi-fire cannons, *R-Type*-style beam-up weapons, extra lives or flying power. Although you can just get close to a target and pump the fire button like mad, extra military potential certainly makes the job quicker and easier. With time-limits imposed on each stage, speed is definitely your greatest need!

Venus would be a simple game but for the cunning pitfalls which are planted here and there. The most obvious are the icons marked on the floor. These make you lose time, bounce you into the path of gunfire or catapult you onto the ceiling. Fighting inverted is a technique you must master. Some bonus pods are also not at all helpful. Some flip the joystick direction to cause confusion, others turn into skulls which drain all your life away. Between each level you are thrown into a bonus sub-game. Here you fly across the screen as hordes of insects bear down on you, shooting and dodging like crazy, picking up energy and bonus pods as they're released. Run out of energy and the sub-game is over, so be quick.

The final twist lies with the bonus rooms, hidden in chasms. To find them you must put your life at risk, because they're invisible. If there's no entrance in the hole you've just dropped into, that's it, Goodnight Sooty! If you are lucky enough to find one, then you get to collect tons of bonus goodies before you come back to the game proper and play on.



Gravity-flip icons on the floor turn your world upside-down...



Life gets tough when bonus pods fall *up* and the controls reverse!

GRAPHICS AND SOUND

Venus is a well-presented game, featuring attractive colours and sprites throughout. The scrolling and animation is smooth, with very little flicker. Graphic styles change every five stages so there's plenty of variety as you work your way through. Music is a little twee, but not unbearable, (it is possible to switch it off if you don't like it) and sound effects are competent.

LASTING INTEREST

Some of the levels, notably the Creeping Swamp and the Kaverns, contain excellent backgrounds which help to brighten up the hard slog to completion. Larger, more deadly insects also contribute to the long-term appeal, as do the Giant Cannons which pop up out of the floor. Insects themselves get 'tooled up' in the last few levels, providing many a surprise: the docile-looking slugs you meet on Level One have big brothers with Armalites on Level Ten.



The first insects are unarmed, but often kamikaze-influenced, so take them out at long range.

JUDGEMENT

For an 'original' game, it really isn't that original at all. It has a good plot and competent shoot-em-up programming, but follows the template of most other games in the genre. Fortunately, the right elements have been mixed in the right proportions, and assembled well. The end result is an addictive, playable game, with plenty of fun and excitement. At the price, it's one to have if you enjoy a good ecological bash! *Neil Jackson*

GRAPHICS	7
SOUND	6
INTELLECT	4
ADDICTION	8
OVERALL	79%

Stealth bombers, the USAF's infamous invisible war planes, are good. So good in fact, that the airforce itself has lost track of one. Last radio contact with the missing bird was over the banana republic of San Paragua, a dictatorship on bad terms with everybody, so the CIA are sending one man to get their jet back. A man named Glames: John Glames.

You are that secret agent, so after a hasty briefing you're flying down to Rio (or San Paragua, actually). To kick off the mission you're armed with a briefcase crammed full of espionage goodies and your own native cunning. Ask the right questions of the right people, look in the right places and use the right gadgets and you'll find that flying machine.

The adventure rolls like a movie from scene to scene, employing different views as the game changes pace. The main action is seen as a 3D adventure where the hero is guided by mouse clicks, with other angles used for the arcade action sequences, as the hero swims and runs for his life. This is Cinematique, an interactive system designed to avoid all that tedious text typing found in 'normal' adventures.

Glames struts into the airport, unaware and unprepared for the events ahead. To start the (thunder)ball rolling he must check for messages, steal a suitcase and get a false passport together. With no background info on the country, it pays to look everywhere and experiment with everything that's not nailed down – even things that are nailed down can prove useful. A forgotten coin in a vending machine gets you a paper, for example, which proves a source of life-saving clues.

Standing at the airport waiting to be kidnapped gets you nowhere, so actions must start speaking louder than words. Employing the menu functions of use, operate, speak, take, examine and inventory you're free to move fast. Glames is an active agent and can do almost anything you want.

There's only one correct solution, so make sure that anything that can be done is done, every item examined, each possibility explored at the first opportunity. Even airport toilets prove invaluable, providing cover and power for secret devices. As the time ticks away, Glames visits parks, mineshafts and even the sea bed – not all through choice. Expect the unexpected, be prepared and plan ahead.

As with all agents of the undercover variety, JG doesn't uncover plots as much as fall straight into them. In no time at all he'll receive coded messages, be shot at, attemptedly drowned (twice!), get kidnapped and play at being a magician's assistant. And as the story gets more outrageous, so the addiction level starts to rise.

Life isn't all correct decisions and cognitive nonsense, since spies live as much on their wits as by their IQs. Interspersed throughout the game are arcade sequences that seek to kill you real quick. Escaping from one perilous situation Glames faces some daunting cave-diving, without the aid of an aqualung or safety net! Once inside the head honcho's mansion he has to dart through a maze of doors avoiding guards in a desperate bid to save his lady.

OPERATION STEALTH



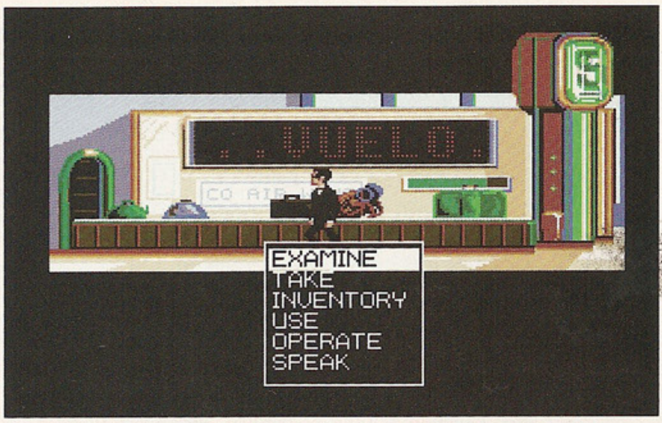
US GOLD £24.99 ■ Mouse



The grinning doorman welcomes you to town. After a brief natter with him it's time to stroll and grab the keys to your luxury apartment. To enter just click the mouse on the door and John Glames will go through them. To ask any questions simply use one of the pull down menus and select the speak option, then he says the right thing. Reacting correctly though is the problem!



Meanwhile back at the freedom fighter's HQ Glames makes an important discovery ie dinner jackets look silly in the jungle!



Baggage reclaim, a big enough adventure at most airports, but there's some supersecret kit stashed in one of them. Kit that will save his life, win the game and match his suit too!

GRAPHICS AND SOUND

Operation Stealth oozes class. Delphine have tuned their system finely and the result is a truly excellent graphic adventure. The characters are sharp and move with precision, while objects can be examined from a distance. Attention to graphic detail and continuity gives *Op Stealth* real character.

The animation reveals the intensive research Delphine have undertaken. They must have sat through hours of Matt Helm and Flint movies to obtain the level of tongue-in-cheek inspiration so obvious in the game. The graphics are humorous but not at the expense of the game, which grows in menace as the plot gets ever more ludicrous. The cartoon sequences are slightly over indulgent, clever but long, reducing your role to that of a viewer and not a player.

After the great sounds of *Future Wars* – Delphine's previous Cinematique project – the music that accompanies the tale is comparatively dull. The single theme is repeated at different tempos with some occasional scene setting music in different locations.

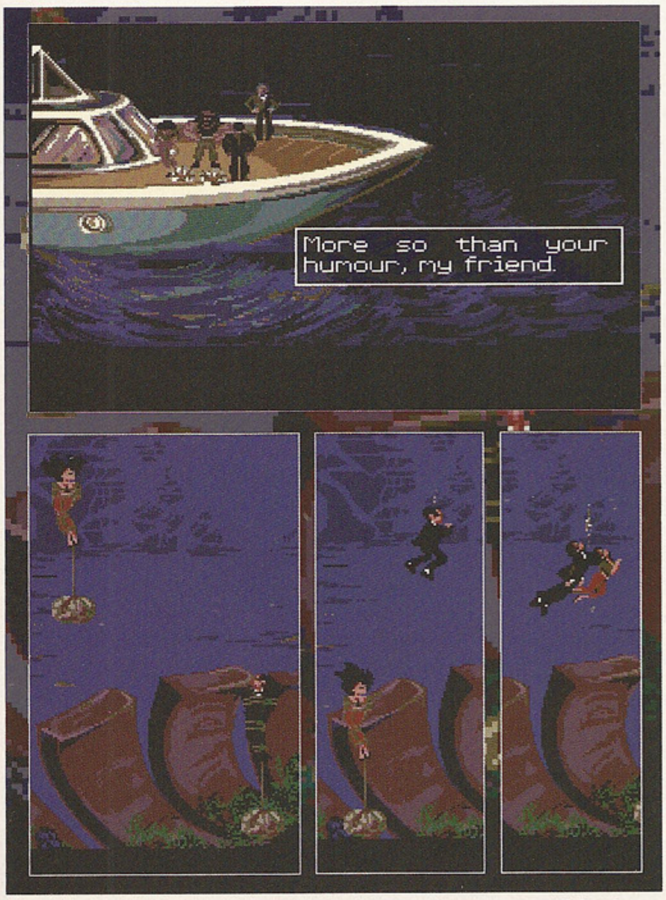
LASTING INTEREST

With a single solution and one life per game, *Operation Stealth* is a stayer of the first degree. It can be a real pain in the hidden compartments, especially during the arcade sequences where you die quickly and can't save, so getting to the next savable position becomes the game's motive force. There's enough options to keep you guessing, but few enough to give you a chance. Glames keeps you on the ball at all times, collecting objects that have no apparent function now but that may be vital in a later scene. Fiendishly designed, *Operation Stealth* will take a long time to solve, with countless tantrums along the way.

JUDGEMENT

Operation Stealth is a worthy successor to *Future Wars*. With the improved Cinematique system, the game flows smoothly, maintaining pace and atmosphere. Once you are familiar with the character and his abilities, Glames is a flexible and friendly hero. Indulging a classic cinema genre that's readily suited to this style of game, *Operation Stealth* breathes life into those Bond fantasies where every woman is a sex kitten, every belt buckle is a bomb and dinner jackets are standard issue. *Trenton Webb*

GRAPHICS	9
SOUND	6
INTELLECT	9
ADDICTION	8
OVERALL	90%



After an embarrassing interlude in a hotel room some new friends suggest a midnight dip. Unfortunately they tie Glames legs to a rather large block. He has to use a device that he bought earlier if he is to avoid a watery grave. He must rescue the lady too if he's to get any further in his search for the missing plane.



After a brief debate about the failings of military juntas Glames is defeated. It's mission over for the super spy.



To escape from the cave Glames needs a pickaxe, but where did he get it from. There more than meets the eye to many of the screens on *Operation Stealth*, so it pays to search everything at least twice.

Just picture the scene. The bird song, the smell of fresh-cut grass, the swish of the rackets, the strawberries and the swearing of an angry tennis star. It can only be found within the excitement of a professional tennis tournament.

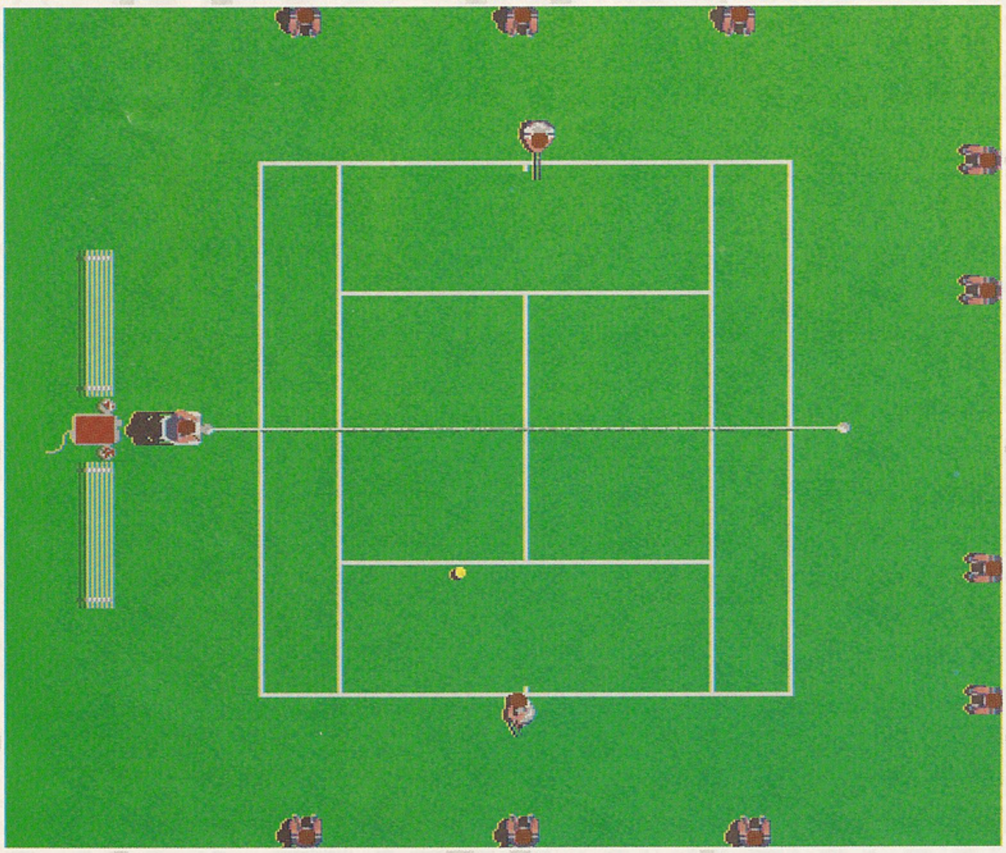
If you've ever wanted to venture out on the court against the world's best players, or even just missed the chance to get a ticket to the Wimbledon final, then here is a chance for you to taste that big-match excitement for yourself thanks to Ocean's latest sports tie-in. Tie Break pits you as a world class player taking part in a variety of international competitions, from the lush green lawns of the British Open at Wimbledon to the harsh heat and plastic courts of the Davis Cup.

You can opt to play solo or as part of a team of up to sixteen players – any number of which can be computer controlled. Once you've selected the team placings you can choose to play in one of the world's top tournaments, each with their own type of court and playing conditions. Then you select the type of racket you prefer and it's off to the match.

Within the game itself, the computer moves your player into position to play the shot automatically – all you have to do is set the type of shot, along with the power and timing necessary to place the ball where you want in your opponent's court. The type of shot is selected by moving the joystick in a relative direction, the longer you hold the position the more powerful the shot, and by hitting the shot early or late you can control the direction in which the shot is returned. Holding the fire button down while returning smashes the ball with extra power – which can be very useful for hammering those clever-clever lobbed shots past your hapless, stranded opponent. Haw-haw!

TIE BREAK

OCEAN £24.99 ■ Joystick



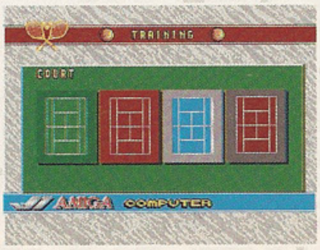
The full grass court in all its glory. While playing, the screen scrolls to follow the flight of the ball into place ready for the shot and return the ball majestically back into the net. Well that's the plan anyway! More than likely the ball will bounce uselessly off the net until you get used to the control method.



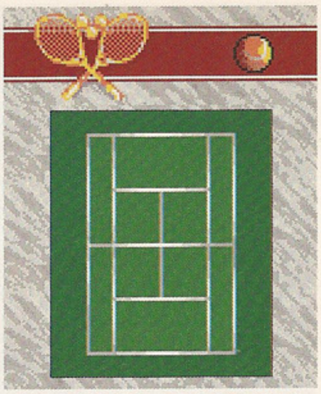
Select a racket to suit your build – the light one if you're a weed!



Oh, look! It's me in the final! And no, I don't look like that!



Grass, clay and plastic courts require different playing tactics.



GRAPHICS AND SOUND

One of *Tie Break*'s main strengths is the atmosphere evoked by the graphics and sound effects. The appearance is very impressive, with some smooth animation and excellently drawn backdrops to portray the action. The sound consists of realistic bouncing ball and crowd noises, interspersed with some superbly sampled umpire calls. The intro music (despite a promising start) is a rather silly affair, with some particularly kitsch "Deuce" samples belting out at odd intervals. However, all in all the presentation is some of the best seen in any computerised tennis game yet released.

LASTING INTEREST

Getting to grips with the control system is easier than expected, so you can get into actually playing the matches without too much hassle. The wide ranging game options – such as racket type and playing surface – and the long list of opponents means that you have a long way to go before you can consider yourself a master at the game.

JUDGEMENT

Right from the superb loading screen and well-drawn presentation pieces, it's obvious that a lot of work has gone into making *Tie Break* an impressive-looking and polished tennis simulation. Couple this with the smooth and realistic gameplay and what do you get? One of the most polished tennis simulations available. The pace and feel of the game perfectly captures that centre-court atmosphere and should have tennis fans throwing their rackets around in typical bolshie tennis star fashion!

Maff Evans

GRAPHICS	8
SOUND	7
INTELLECT	5
ADDICTION	7
OVERALL	84%

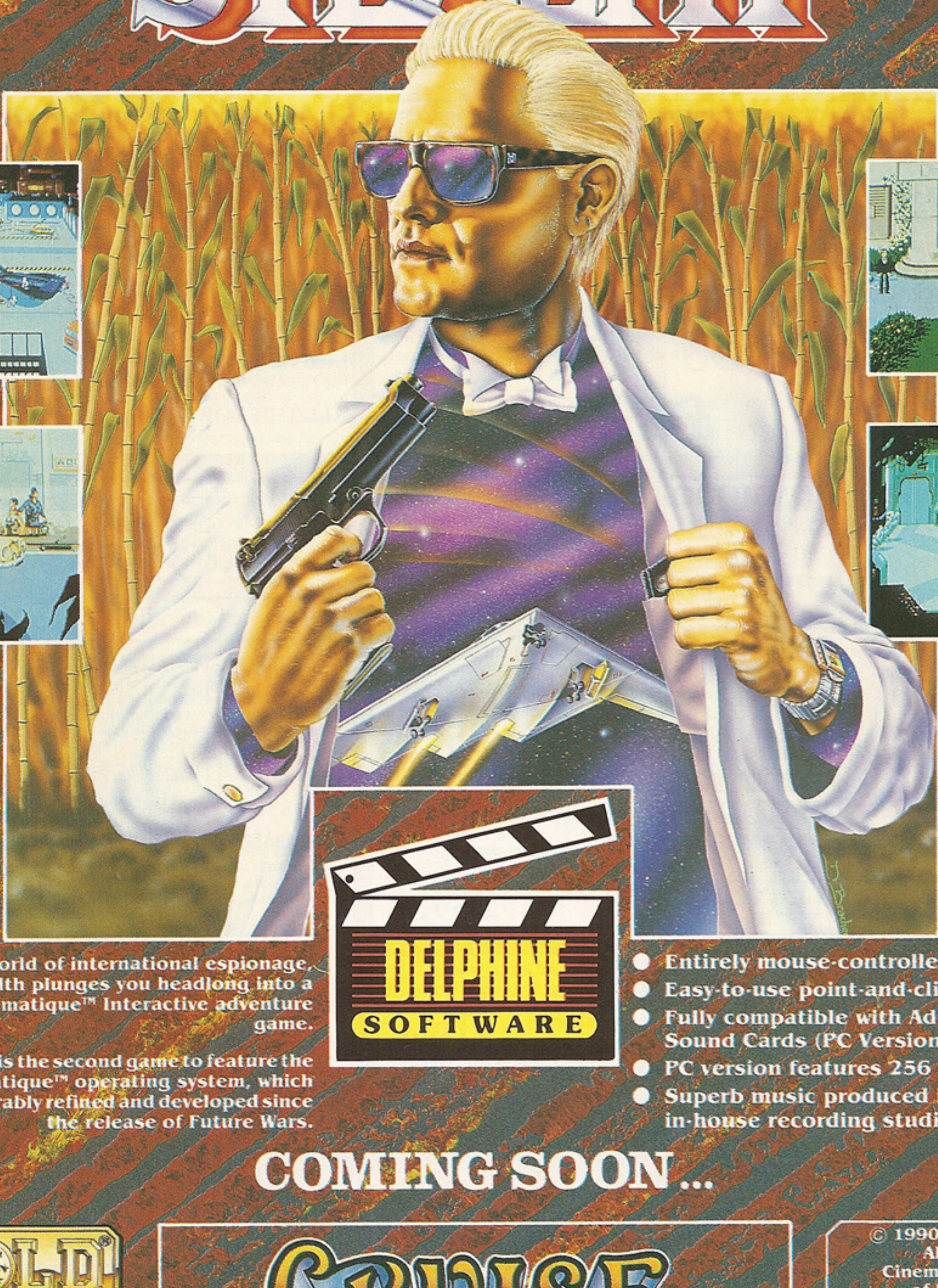
FROM THE CREATORS OF

FUTURE WARS

WINNER OF THE 'IN DIN' AWARD FOR THE BEST OVERSEAS GAME

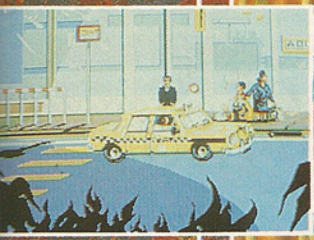
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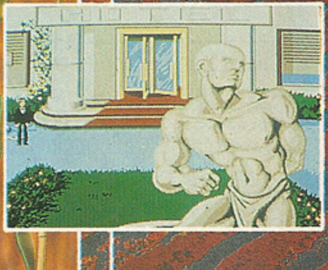
OPERATION STEALTH

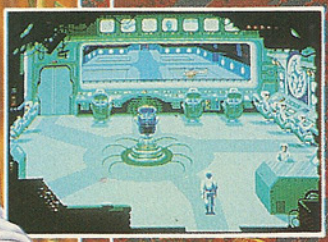




Screen shots from Atari ST version







Screen shots from Amiga version

DELPHINE SOFTWARE

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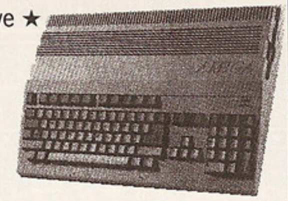
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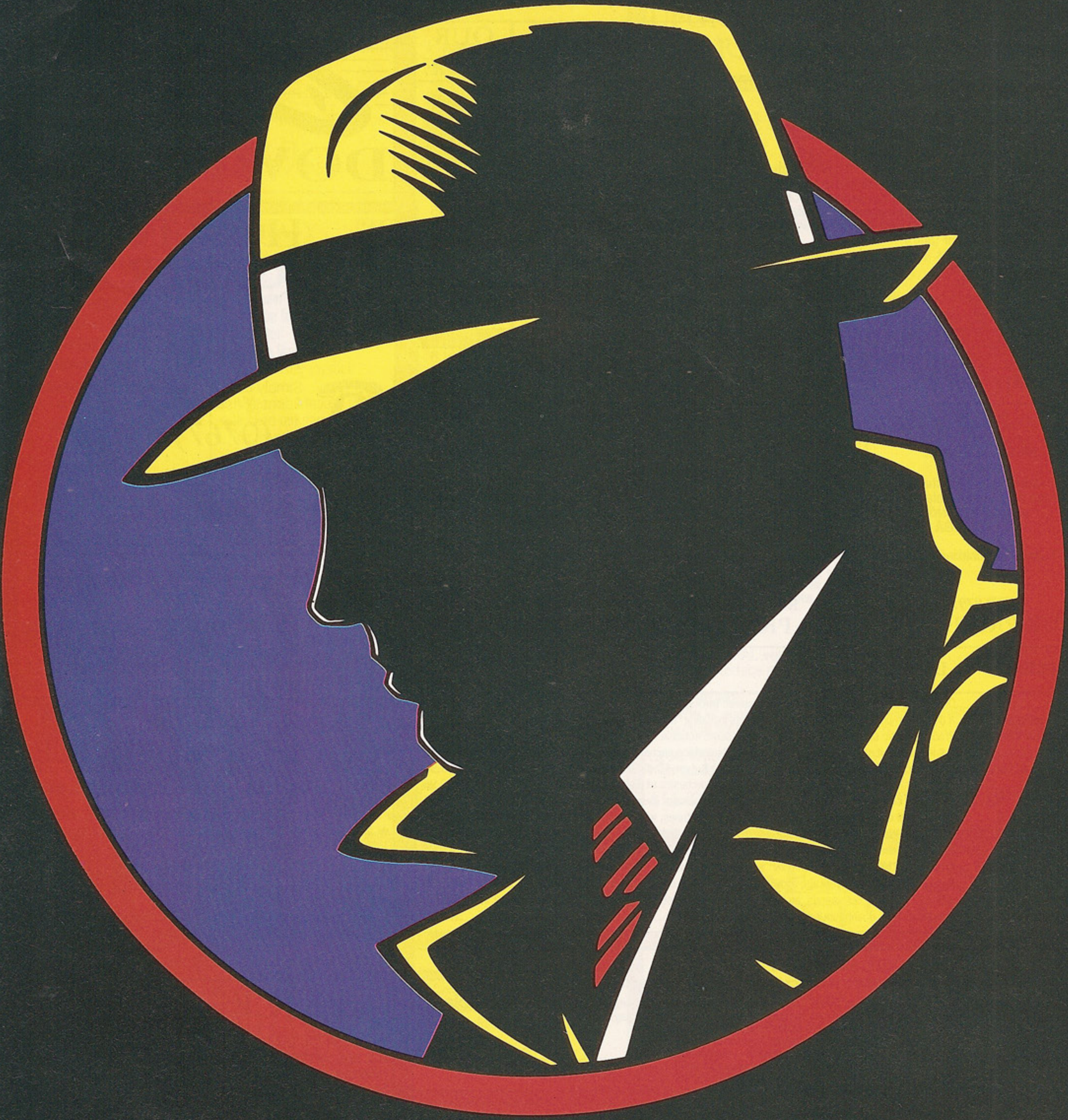
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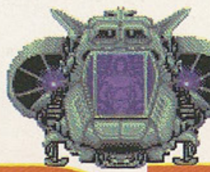
Taking on the role of a mercenary you are to pilot the ship 'Starblade' through space, visiting varied and interesting locations en route. On board the Starblade it's possible to walk around and visit the stores, the engine room or even the airlocks, to be sure your spaceship's ready for action. From within the cockpit you have complete control of the spacecraft with five control panels to access all of the Starblade's facilities.

There's communications to send distress signals or receive messages, navigational controls to select destination and speed (Hyperspace or Conventional). There's a big-screen view of what's out there for the battle station, used to blow any offending space trash into the next galaxy. While to check up on the old engines and circuits you simply need to glance at the status board.

Once you've explored the Starblade set your destination by picking a planet, leave the airlock in the shuttlecraft Allta and fly automatically to a planetary landing. Pressing the spacebar allows the viewing and selecting of various weapons that you've picked up along the way. Remember, there's aliens out there and they ain't always pleased to see you.

Starting with a laser sword and a few grenades you'll desperately want better weapons, more food and some oxygen, as well as extra components for spacecraft repair. This requires a bit of trading. Your limited credits are used to purchase items from passers-by or at trading posts.

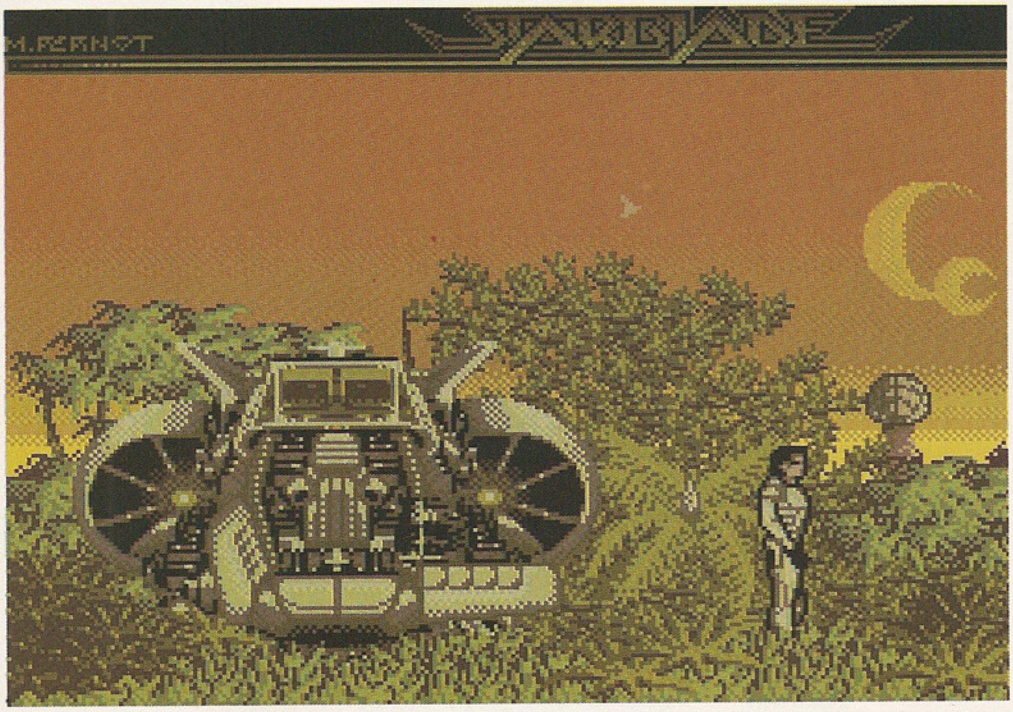
Some planets can only be explored if you've enough oxygen in your suit, so make sure you read the planet info before touchdown. The energy bar shoots down if you're hacked by aliens or if you can't breath, so take care – space can damage your health!



STARBLADE

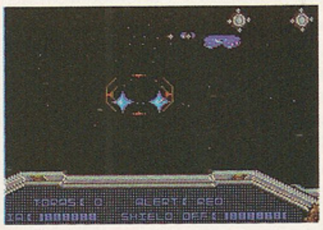
PALACE £24.99 ■ Joystick/Keyboard

Touchdown. The roaming mercenary visits another world full of strange and curious creatures, all of whom are begging for a bashing. Get in, get supplies and get out if you're to kill the evil Genolyn.

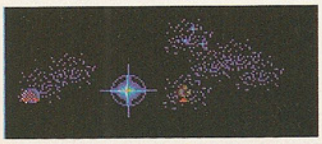




Top: Checking the engines. Middle: Using the inventory to buy, sell or use objects. Bottom: A planetary adventure gets messy. Kill them all!



Incoming enemies get the treatment (hopefully)!



Pick the planet, the speed of travel and you're there – almost.

GRAPHICS AND SOUND

Starblade's presentation is polished. The ship and the backdrops are excellent. The atmosphere's maintained during play and the mid-50s science-fiction theme is really brought to life. Unfortunately the sprite animation can't compete. Planetside, the variety of backgrounds is pretty but the aliens are jittery and a bit blocky. Worst of all is the slow fade and the use of flick screen scrolling, which looks authentically 50s B-movie but irritates like hell after a few games. Sound is limited to the odd laser gun beep or a doos wishing shut.

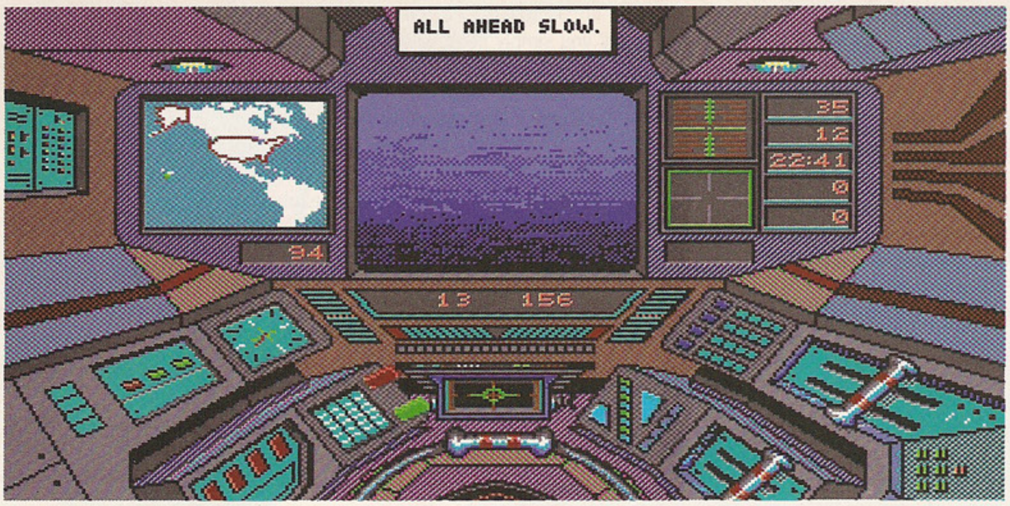
LASTING INTEREST

The number of worlds to fly to and the arcade sequences once there make *Starblade* a challenging task. The game requires a lot of tactical thinking and is sure to keep the interest there for a long time. The frustration sets in when the planets, obstacles and routes start to become familiar – a real drag, as the tantalising backgrounds are always different.

JUDGEMENT

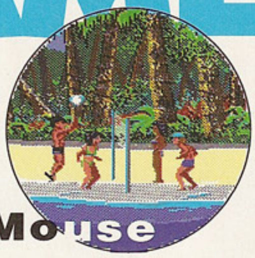
The concept's original and is sure to appeal to many. The options take time to get to grips with, but even the first few attempts lead to new occurrences and adventures each time. The overall prettiness plays a big role in creating a special atmosphere of space exploration, an effect that's only marred by the arcade section's clumsy feel. *Mark Hill*

GRAPHICS	6
SOUND	2
INTELLECT	6
ADDICTION	7
OVERALL	67%



The USS Blackhawk the submarine that's the heart of Codename Iceman. With over 30 diffent controls and readouts to watch over there's plenty to do. It's easy to drive but handles like a bus, so take care.

CODENAME ICEMAN



SIERRA ON-LINE £34.99 ■ Mouse

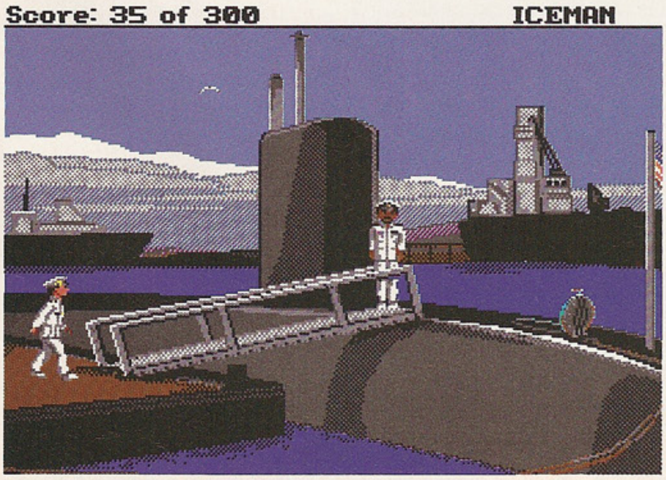
Spies like us enjoy the occasional break. Nothing's nicer than sitting on the beach of some sunwashed isle sipping Mai Tais with the ladyfolk. So Commander Westland, the eponymous Iceman, is more than miffed to have his holidays spoiled by a breakdown in detente, critical hostage situation and threatened nuclear war. Things that only the Iceman can sort out, naturally.

This latest offering from the American adventure specialists is a tale of international intrigue beside, on and under the high seas. Westland is a CIA spook and his actions are the focus for the operation bearing the codename Iceman. The job involves the wandering and collecting that's standard fare for Sierra adventures with the added bonus of a submarine sim.

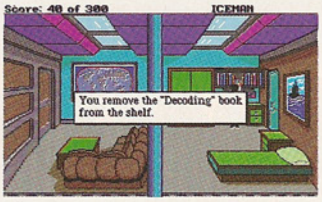
The story begins with the secret agent man relaxing on said tropical isle, where he must uncover the background plot from newspapers, phone calls and a particularly forward young lady who insists on calling him 'big boy'. After gathering such vital lifesaving kit as an ID card and flowery shirt, it's off to Pearl Harbour, via the Pentagon.

After a lot of saluting he takes control of USS Blackhawk and the real game begins, mixing simulation with more traditional adventure modes. The sub's controlled via key commands or mouse clicks on screen, as the Iceman tries guide his baby around the oceans, sorting out the evil terrorists and cooling the cold war down.

With mouse commands for movement and text to communicate, the game exhibits a high degree of interaction between Westland and the people he stumbles across. It's flexible, but there's only one solution and many pitfalls along the way. Get drunk and the world goes up in smoke while he's giving it the technicolour yawn. Forget to check that he has the right documentation and he'll never set foot aboard the Blackhawk.



After a mission breifing the Iceman hits the seas. Walk him up the gangway with the mouse and then start saluting everything.



It pays to search everything, even your own cabin, for clues.



The shame of it! The Iceman comes unstuck in Tahiti, game over. Time to use a saved game.

GRAPHICS AND SOUND

Pace is not something that the *Iceman* exudes, shuffling about the walking scenes even in high speed mode. The piccies are cute though, with some neat preset animation sequences; Westland staggering around whacked out of his brain on cocktails, for example. The sub itself comes with the standard 'in the cockpit' view and looks complicated, but it is reasonably easy to drive around the ocean. It's flexible and clear enough to keep adventurers happy, even if true simulator freaks would find it lacking.

The humour that pervades the game is also present in the music, which opens with a Formbyesque ukelele solo to set the scene in Tahiti. In-game, though, sound is sadly limited to the occasional intermittent spot effect and yet more mood music to introduce new scenes.

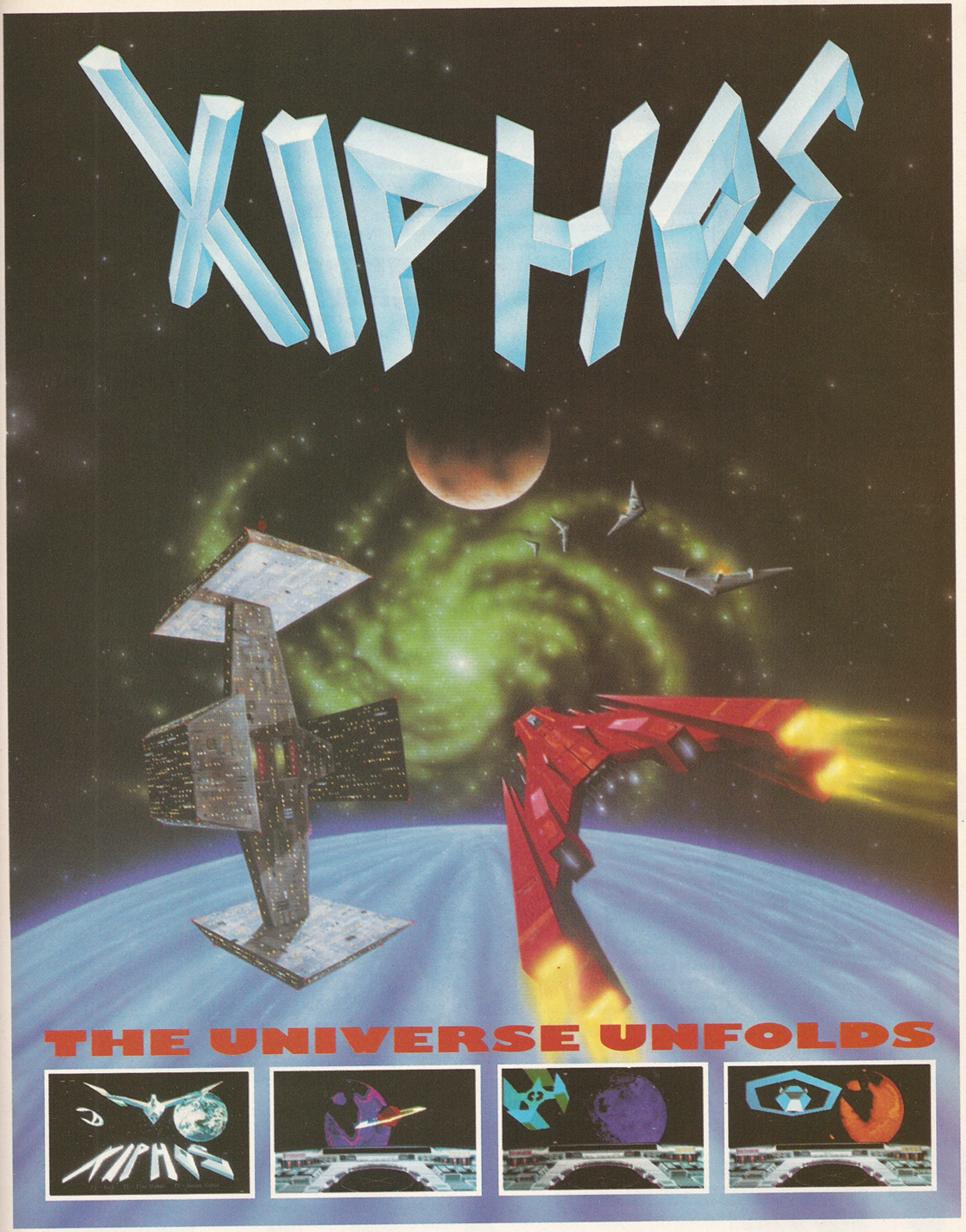
LASTING INTEREST

Packed onto five disks – not one, or three, but five – *Iceman* instantly looks the kind of game that should have you slaving away for months. But this is due more to the aeons spent accessing disks rather than the vast complexity of the game. It is deviously designed, fair enough, but all the intrigue is destroyed by the game's sluggishness. Even the rolling score at the top of the screen fails to inspire, because points are awarded for seemingly 'pointless' tasks such as playing volleyball and saluting the flag. Never mind saving the planet: protocol and etiquette, it appears, comes first.

JUDGEMENT

***Codename Iceman* is a variation on a theme for Sierra who stray outside their traditional preserve with the introduction of the submarine simulator. Fans of painstaking detective adventures (and, of course, disk manufacturers) will love it. Yet there's so much disk swapping, fiddly hero manoeuvring and acres of time spent loading that even saints would curse at the frustration of it. A first-class adventure in design, *Codename Iceman* is eventually crushed by it's five-disk size and snail biting speed.**
Trenton Webb

GRAPHICS	6
SOUND	2
INTELLECT	8
ADDICTION	0
OVERALL	64%


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"I whill not biii thees recorrd, eet ees scretched."

No, no... this is a game review.

"Aaah! I whill not biii thees game review, eet ees scretched!"

Err... pardon me?

"Drop yoor pantees, Sir Whilliam, I Cannot whait teel lunchteim..."

Err... yes... and now I think it's time for something completely different.

After years of reciting the scripts over the odd pint in the pub, Monty Python fans can now get hold of another piece of Python memorabilia in addition to the various videos, records, books and tapes. Monty Python the game places you in the rather ungainly shoes of gentleman, wit, Casanova and connoisseur – DP Gumby, he of the stunningly beautiful flower arrangements.

Poor old Gumby has suffered quite a traumatic experience. The four sections of his brain, fed up of the badly-cramped conditions inside Gumby's head, which is rarely used except for breaking of bricks, have decided to make a break for freedom. Finding life in the big wide world more fulfilling than being pounded by pieces of multi-purpose masonry, the pieces of brain don't want to return, so Gumby sets out on a trek to retrieve them.

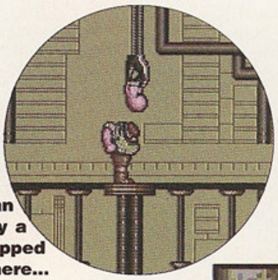
Armed with little more than a knotted hankie, a plan from Mrs Gumby which involves eating copious amounts of Spam and a handful of fish (wherever did that fishy go?) Gumby sets off into the wilderness. After dodging falling weights, and being pursued by a beleafed Mr. Johnson (who is learning the art of not being seen), Gumby has his body removed and the anatomy of a fish attached.

From here he must swim through the pipes, collecting Spam as he goes, or he can choose between sausage, Spam and beans or Spam, egg and beans or Spam, Spam, egg, Spam, sausage, Spam, Spam, beans and Spam. After battling the deadly keep-left signs and defeating the Spanish Inquisition (I bet you didn't expect the Spanish Inquisition... NOBODY expects the Spanish Inquisition!)

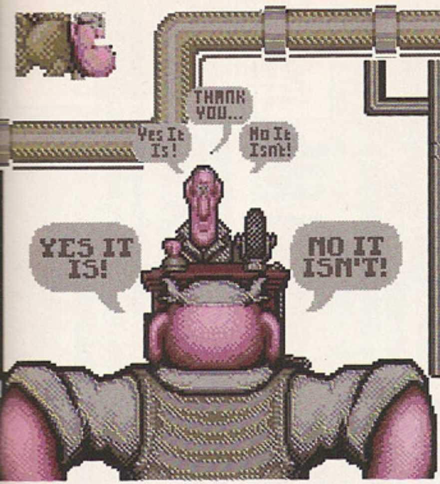
At the end of the level... oh, forget it. I never wanted to be a reviewer, all I wanted to do is sing... NO! We're not having any of that in this magazine! Oh, all right then...

At the end of the level (I keep getting this funny feeling of déja vu), Gumby retrieves his body in time for an argument with the Minister of Contradiction.

No he doesn't.
Yes he does.
No he doesn't.
Yes he does.



And now...a sketch about a man who has his head ripped off by a machine, called the Head Ripped Off Sketch. Over there...over there...

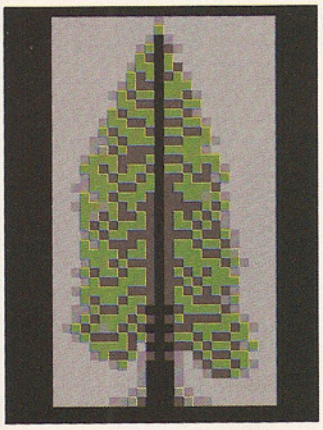


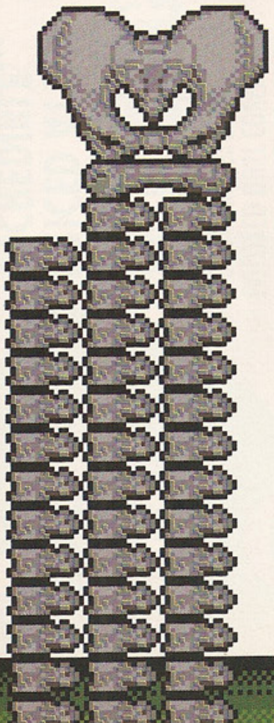


Hold on, this is rather futile! Gumby came in here for a decent argument. No he didn't he came in for an argument. No he didn't. Yes he did. No it didn't! Yes he did!

Once the argument is over it's back home to Mrs. Gumby, who uses the Spam he's collected to try and tempt back one of the pieces of brain. Then he goes back to another strange land to find some more of that lovely tinned food… Spam (Spam, Spam, Spam, Spam, Spammity-Spaaaaam, Wonderful Spaaam!) SHUT UP! Bloody Vikings.

And now…Number one… the Larch… theee Larch.





GRAPHICS AND SOUND

It'sss…

…surprising how much the game's graphics look like one of Terry Gilliam's cartoon sequences. The use of colour and shading perfectly captures the feel of the opening credits of an episode of the TV show, from the hunch-shouldered Gumby stomping around the levels to the large show-stopping foot when you lose a life. The sound effects (sampled directly from the series) enhance the atmosphere even further, from John Cleese's dulcet tones in the argument to Terry Jones reciting the food that Gumby has collected. Unfortunately, the Sousa march intro music is a mite on the grating side (rather like grating cheese, but this isn't a cheese shop). "I'd just like to say that this is the first time I've been quoted in a game review."

I'm sorry we haven't got time for that right now.



LASTING INTEREST

The gameplay is quite simplistic, but the puzzles involved give you one reason to come back to the game – the puzzles and sheer sense of humour… that's two, two reasons… the puzzles, the sheer humour and the urge to see what the next level's like… that's three, three reasons to… all right! Start again!

Amongst the reasons to keep you returning to the game are the devilish puzzles, the sheer sense of wacky humour and the urge to check out the next level. Once all the levels have been completed, it's still quite possible that you will return to check out the jokes again – after all, people watch the TV shows again and again, don't they?

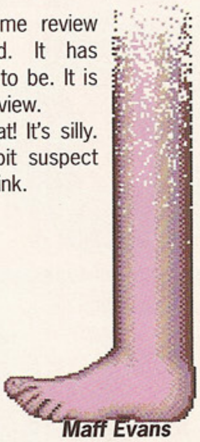
JUDGEMENT

It would have been all to easy to just bang out a bog-standard platform game with a few Python-related characters bouncing about and rely on the name to shift units. Core have done a surprisingly good job in translating the feel of the Python gang's humour to the Amiga, from the superb graphics to the occasional intermissions, where an obscure off-the-wall gag appears. Behind the impressive appearance, the game itself is also rather playable, which means that those unfamiliar with Python humour can get into the gameplay. In fact there's only one thing wrong with the game…

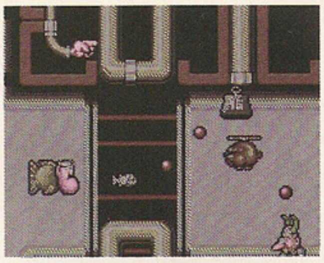
you don't get wafers with it.

This game review is dead. It has ceased to be. It is an ex-review.

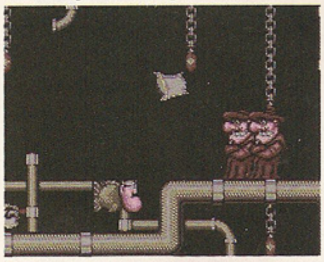
Stop that! It's silly. And a bit suspect too, I think.



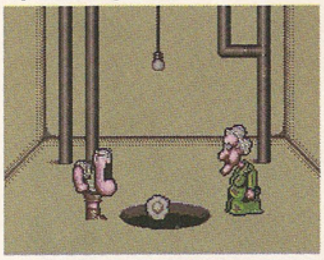
Maff Evans



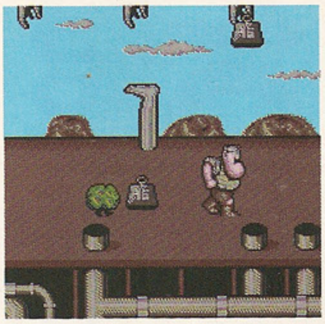
A hamster! You can't stop this kind of terror with a munchy bit of lettuce, so let him have it before you burst your brain!



Gumby a la poisson comes under attacck from one – no two, two members of the Spanish Inquisition.



Gumby regurgitates his loot for Mrs. Gumby. Well, I have to say one thing, I... HOPE... SHE...IS... EN... JOY... ING... THIS!

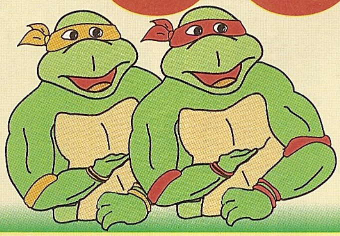


Gumby stomps through the weights, which fall on poor Mr. Johnson. He hasn't remembered how not to be seen. Stand still!

GRAPHICS	8
SPAM	10000
SOUND	6
INTELLECT	2
SPAM	159
ADDICTION	7
SPAM	4361
OVERALL	88%
SPAM	14520

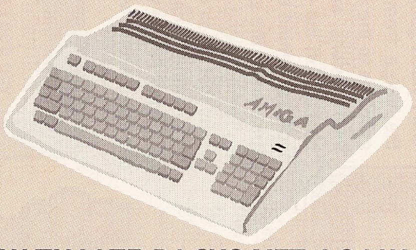


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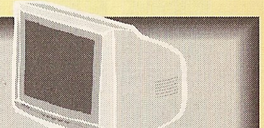
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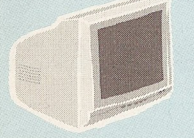
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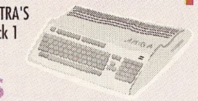
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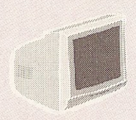
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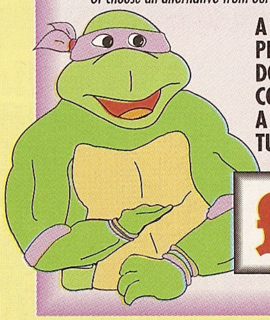


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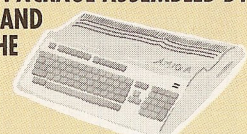
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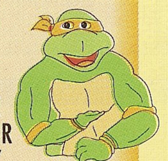
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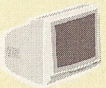
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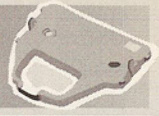
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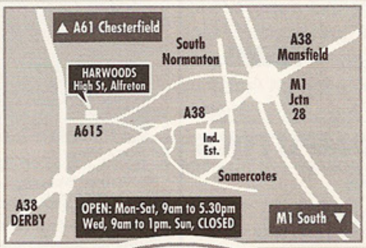
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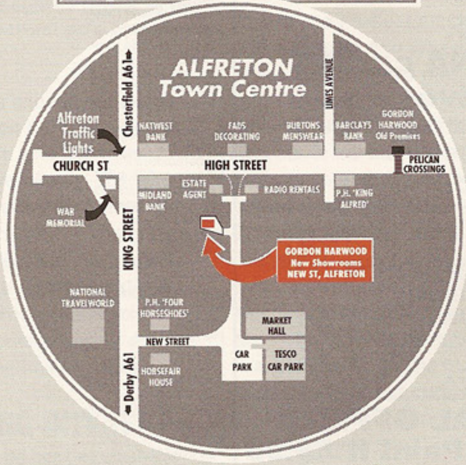
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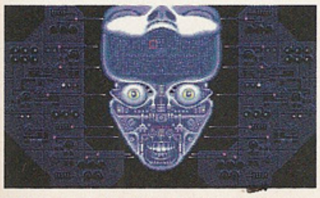
Extase is a deactivated android that's been discovered in an alien system. To reactivate the droid various mental conditions must be repaired individually, starting with her Dream State. Each is revived by rebuilding a circuit before the other player.

Floating above the circuit as a bubble you dive in and hit the wires when the mouse button is clicked. To bring the circuits to life a number of tasks must be performed simultaneously. The wires must be recharged so energy pulses can travel to the brain and switches must be turned to ensure they go the right way. Transistors have to be created (by diverting energy pulses through a generator) to bridge gaps in the wires and then lifted into position.

If you've picked up a newly-created transistor and flown down to plug a gap, the second you touch a cable a spark appears. No ordinary spark, this one hunts down transistors and burns them out. Sparks, unfortunately, can also be caused by touching down on a spark generator. It's pretty daft to set these little geeks loose on your own wires but if the other guy's ahead then, well, that's another story.

Extase forces players to behave with complete selfishness. Opponents who are getting too far ahead can be stopped in four ways. Transistors can be blagged from the enemy's wires, switches can be set the wrong way, sparks can be sent out to wreak havoc and best of all the other bubble can be muscled out of the way.

Timing is the essence of *Extase*, using the game-winning pulses to create components at the right rate, fending off the sparks, activating switches at vital moments and sabotaging circuits, all of which comes together in one frenzied game. *Extase* is viciously competitive, mind-numbingly hectic and therefore it is a sheer joy to play.



The mind of the machine Extase



The player on the left wins, connecting up Extase's circuits once more. The small grid box below her chin is the fuse generator. It's here that power must first be directed if you're to stand any chance of winning. The red circles are switches, while the green spheres are the pulse generators. The fuses complete the circuit by fitting in the green rectangles on the wires themselves. Reactivation's complete when pulses reach the junction in her forehead.

GRAPHICS AND SOUND

Play *Extase* and your ears will love you for ever. Starting with an ethereal Arabic yodel, you are lured into a false serenity. When the game begins there's a strange silence with only your actions causing an occasional violin riff. The music slowly builds into a crescendo that matches hectic moves you are forced to make for victory. Each level has a totally different tune that echoes the theme of that stage and even the spot effects blend brilliantly.

The huge head that dominates each level is striking and immediate. As each reactivation nears fruition the face animates, again in keeping with the level's theme. Madness sees the lady roll her eyes and loll her green tongue. Vision Control sees her brows crease with her eyes rolling uncontrollably. The wires and the circuits themselves are standard fare, just so many lines, but they off set the stark head perfectly. The graphical simplicity of the game counterpoints the music to create a feeling of alien, yet non-hostile, worlds.

LASTING INTEREST

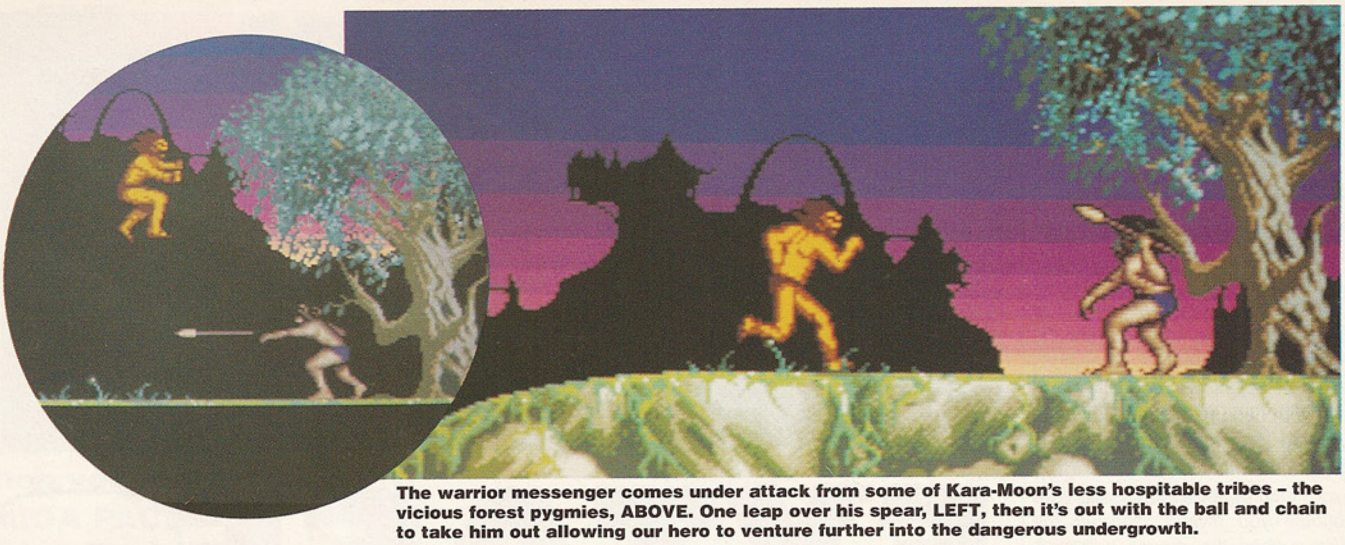
Extase is at its best against the computer. You can be as evil as you wish and, depending on the level, all it tries to do is mirror your steps. Playing against a friend invokes too much malice. The three levels of difficulty do not alter the circuits – they could be no harder – but the opponent's more aggressive and the number of the destructive sparks increases, causing even more brainache.

Each level gets more complex, requiring greater trickery to complete. There's massive scope for skill development and the increasing lunacy of circuit design makes each level a personal affront. *Extase*'s addictiveness is staggering, but its simple concept calls staying power into question. It's not exactly the sort of thing you dig out after a hard day at the office – unless it's to soak up the soundtrack.

JUDGEMENT

Extase is a musical masterpiece and a graphic extravaganza. There are too many massively wild elements for it to be ignored, and many will fall for its charms. It will leave some gamers cold, though: it's just too outrageously strange. Diametrically opposed to the big licences, *Extase* will be enjoyed by those who relish original puzzles, mental multitasking and tests of mouse dexterity. *Extase* is a game only for the brave, but to them will go the curious spoils of the most original product this year. *Trenton Webb*

GRAPHICS	8
SOUND	10
INTELLECT	5
ADDICTION	9
OVERALL	86%



The warrior messenger comes under attack from some of Kara-Moon's less hospitable tribes – the vicious forest pygmies, ABOVE. One leap over his spear, LEFT, then it's out with the ball and chain to take him out allowing our hero to venture further into the dangerous undergrowth.

SHADOW OF THE BEAST II

PSYGNOSIS £34.95 ■ Joystick and Keyboard



In the strange and distant land of Kara-Moon, the lightning of a fierce storm crackles around a tall, forbidding tower. Within the tower, Zelek the Beast Mage is reflecting on his position.

After Zelek's defeat by the warrior messenger, Maletoth the Beast Lord expressed bitter disappointment and ordered Zeleth to find another child suitable to be turned into a new warrior messenger. So far the search has been fruitless, but on this dark, stormy night one of his cowering minions enters the tower and tells the Beast Mage that a suitable girl-child has been found. Without further ado, Zelek hurls himself through the window into the night, transforming into his bestial form of a large, fearsome bird, and sets off to find the child.

Eventually he arrives at a high ridge above a small cottage, where the sound of a baby crying can clearly be heard. Slowly, realisation of where he is creeps into Zelek's brain. This was the home of the previous warrior messenger – so the child must be his sister! At last, a chance for revenge. Zelek holds aloft his staff, catching the streams of electricity from the storm, and once more shifts into his beast form, to swoop down and take the child to his tower.

You, of course, are the previous warrior messenger, returned to human form after defeating Zelek and escaping from the Beast Lord. You must fight your way through the realm of Kara-Moon, braving the dangers of vicious monsters, deadly warriors and perilous terrain. You begin armed with a limited supply of life potion, which you drink whenever you take a hit, and a ball and chain. Additional weapons can be found on your quest, however, along with extra vials of energy potion to top up your flagging supply.

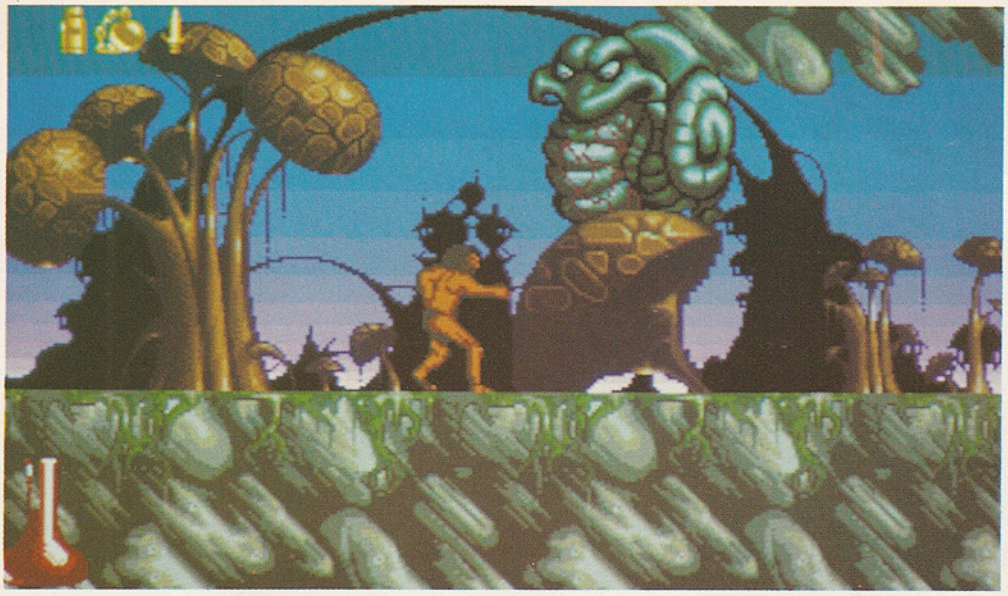
By no means all of the creatures you come across are intent on your destruction, although a large creature lunging towards you with an giant axe isn't likely to buy you a pint and a packet of peanuts. Some creatures can be conversed with to uncover clues or gain equipment to help you on your quest. Certain replies to questions that you might ask give hints to the next question, thus building conversations. Some of these little chats will lead to extra quests, whereas others will tell you where vital clues can be found.

It is up to you to save your young sister from the clutches of the evil Beast Lord and so spare her the agony that you have already been through.







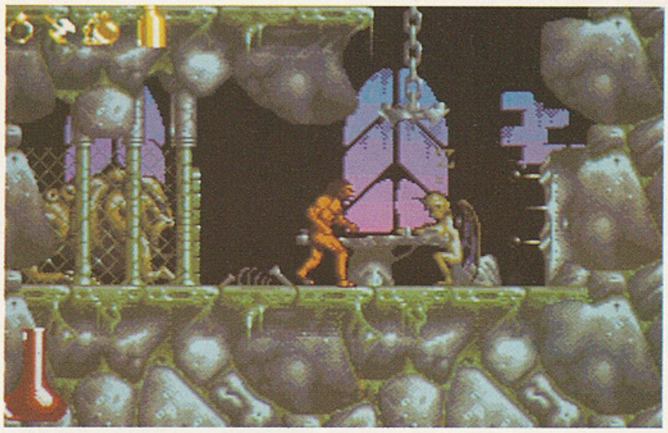


Bet you've never seen one of these specimens nibbling away at your cabbages! Unless you eat mushrooms like the ones in the background, that is. Forget slug pellets and insect repellant, just heave a few pounds of metal at his head. More useful gardening tips next month.

GRAPHICS AND SOUND

Anyone who has played the original *Shadow of the Beast* knows what to expect from *Beast II*. The sound is very much in the same vein as the first in the series, with mournful panpipes playing over a sombre orchestral backing. The new Game Over screen contains a new piece of music with an incredibly effective wailing guitar solo, which is very reminiscent of Hendrix (Albert Hendrix from Cleethorpes, that is, No, only joking!)

The graphics lack the multi-level parallax scrolling from *Beast I*, but the use of animation, colour and shading means that the overall appearance is more atmospheric. Each different type of enemy appears in its own surroundings, so there isn't so much of slapdash feel to the positioning of the monsters. For example the pygmies are in the forest, the water drips are in the caves and the giant fish are in the river. All in all, the loss of technical wizardry in the presentation is more than made up for in feel and atmosphere.



Hello, I'd like to open a bank account please. Oh, and what kind of life insurance policy can you give me for warriors about to do battle with a large, shape-changing Beast Mage?



What's that stuff he's firing? It certainly isn't jelly. Jelly doesn't fight back when you hit it!



This giant fish can come as a bit of a surprise, but he's no match for a good bash in the face.

LASTING INTEREST

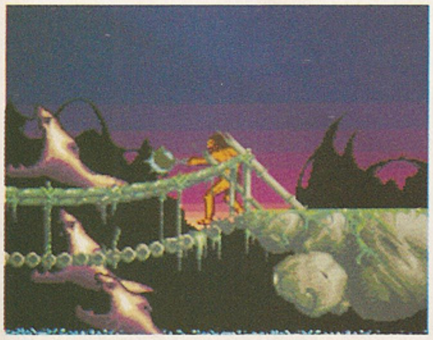
Right from the start the game is incredibly tough: having only one life isn't really conducive to lengthy quests! With time it does become possible to battle through... once you've spent quite a few games learning the positions of the monsters. Having said that, it will still take some considerable time before the final objective is reached. Just too late you realise what you should have done at a particular point and find yourself bashing the button to start a new game!

JUDGEMENT

Most people's anxieties about how much gameplay *Beast II* would have can be assuaged by the promise that there is quite a bit more! The regimental lines of enemies have gone, giving the game a much more frantic and random feel. So instead of sitting in the same place, picking off the nasties as they advance towards you (very boring), you have to be sharp enough to battle attacks from every angle.

The game has a lot more depth than the original, with a series of mini-puzzles to complete along the way before the necessary clues are available to you. It still has a few annoying quirks, such as the lengthy loading times and the fact that you can lose your one and only life far too easily, but there is enough gameplay this time around to back up the pretty graphics and atmospheric music and make it all worthwhile. Oh, and don't forget the free Roger Dean T-shirt! *Maff Evans*

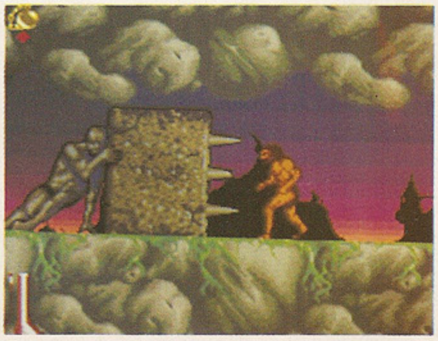
GRAPHICS	9
SOUND	8
INTELLECT	5
ADDICTION	7
OVERALL	87%



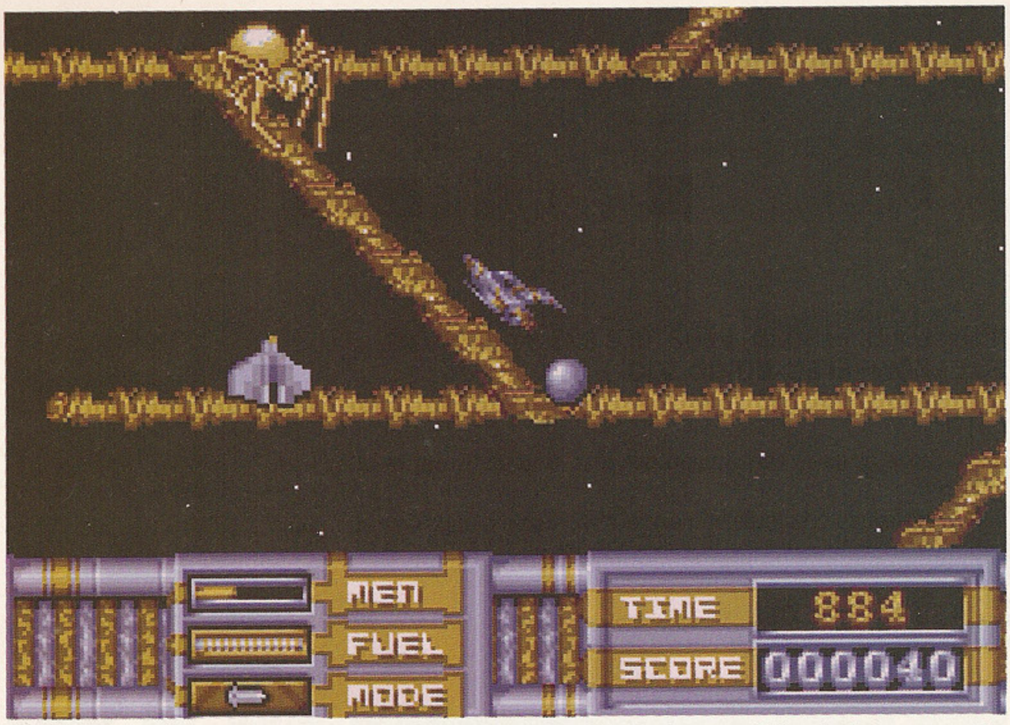
Aaargh! It's the dreaded leaping fish of doom! Time to get the weapons out and turn them into fish fingers. Yum!



One of Zelek's demons holds an innocent victim captive. Let him have it to release the prisoner from the deadly electric field.



Will the warrior's ball and chain reach past the block to defeat this foe? Or will he fall foul of those evil-looking spikes?



Oh no! A big creepy-crawly! Shoot! Maim! Kill! Those things at the bottom of the playing area are the transporter, where freed captives are deposited, and the energy sphere, where you can get more petrol and bullets.

GRAPHICS AND SOUND

A tune that would not be out of place accompanying a Snoopy cartoon plays throughout. It's enough to have you reaching for the volume control before you become a gibbering wreck. The graphics aren't bad exactly, but they're not stunning either. The spiders are nicely drawn and well animated but the blokes are tiny, they're little more than stick men. The web is very angular and doesn't really look like a web at all. Nice, but there's precious little variation either colour-wise or graphically.



Ha, a spider! Eat lead, alien scum!

WEB OF TERROR



IMPRESSIONS £19.99 ■ Joystick

What strikes terror into the hearts of grown men more than anything? Small eight-legged creatures with mandibles, that's what! Bit silly really, considering they're harmless and their only interests in life are weaving webs and eating flies.

Mind you, magnify their size to ten times the size of a house and give them an appetite for human flesh and it's a different story. Especially when a spaceship full of passengers happens to crash-land bang into the middle of the biggest arachnid-infested web that you've ever seen.

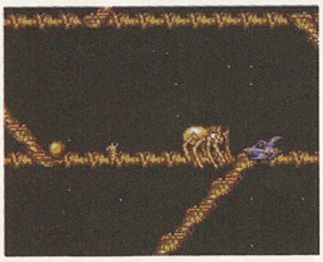
And that's exactly what has happened. A starliner is stuck in the sticky strands, and the passengers have scarpered. Their lives are in your hands. You have just about enough power to move along the web itself. It's their only hope of escape.

Your mission is to free the fleeing passengers. Some are roaming around the web, while others have had the misfortune to be cocooned by the oversized people-eating beasties. Your craft can only carry four at a time, so you need to act fast. Somewhere on the web there's a teleport. Take the freed folk to that and they're safe. Also hidden on the web are power pods. Take your ship over one and your flagging energy is restored, as is your limited supply of ammo.

Movement is strictly along the lines of the web. You can go left, right and diagonally in four directions. Your little ship has inertia, so if you're pelting along at full speed and see a spider, chances are you're about to end up dead. Each creepy creature takes several hits and, besides, contact with a spider – even in its dying throes – results in doom.

So a cautious approach is called for. You have to sneak around the web, but don't take it too easy – there's a rapidly decreasing time limit and the captives go through the stages of being cocooned, then eaten alive at an alarming rate.

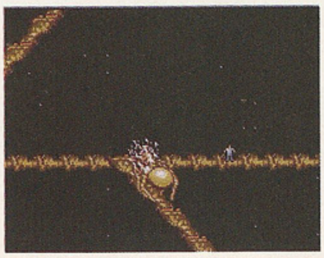
Locating the imprisoned peeps is made fairly easy by the radar at the foot of the screen. It only shows free-moving people, though, so you need to keep a careful eye on it. When a dot disappears then someone's been cocooned. You have to move really fast then because the next time a spider comes across the trapped people it's feeding time!



Kill the spider, rescue the prisoner, and get some more energy.



A spider has got one of your men. Quick, run away!



Whoops! I seem to have been devoured. Oh dear.

LASTING INTEREST

There are reputed to be 125 levels to play. If the first few are anything to go by, there isn't an awful lot of difference between them. No number of levels can disguise what is essentially a dull game. After the first few goes, it'll remain on the shelf and rarely see the insides of your disk drive.

JUDGEMENT

The constraints of web travel take away the freedom of movement that is normally enjoyed in shoot-em-ups. In fact it's downright annoying! The control system is jerky. You have to hit the diagonals precisely to move off the horizontal sections of web. It's all too easy to miss a vital turn-off that would save you from being devoured. *Web of Terror* is a quirky game, frustrating to play and there's just not enough there to keep you going.
Adam Waring

GRAPHICS	6
SOUND	6
INTELLECT	2
ADDICTION	3
OVERALL	48%



Rockets fired from ground-based installations like this one on Level Two are remarkably adept at avoiding being hit and are able to withstand a phenomenal amount of damage to boot. So it's a good thing that this one isn't firing and you're only faced with a formation of spaceships, which whizz around like a caterpillar on acid, and a cascade of invulnerable energy spheres of the collide-and-kill kind.

ZIRIAX

First effort from a brand new programming team known as Whiz Zidz, this is a horizontally-scrolling shoot-em-up with more action than you can throw a guided missile at. The format is familiar: fly along as dexterously as possible, kill or avoid baddies, pick up special weapons pods and take on the big guy at the end of the level. Put him out of his misery and zoom on to the next level.

The aliens are all fair game, just take your pick. There are pincers, invincible metallic pods that erupt with fireballs, animated towers that pump out death in your direction and pulse-laser pods. From the centre of the screen come caterpillar flying saucers and more metallic stuff that releases more fireballs. Meanwhile, attached to the fabric are a number of misleadingly attractive crystal balls. Shoot one and you don't get a chance to apologise. As if that's not enough, lurking at the back are the spinning silver ballcocks of death. This is just on Level One.

The end-of-level baddie is the kind of problem estate agents often describe as "mature foliage", a whole bunch of overgrown flowers which cling to the roof, wall and floor of the fabric tunnel and spit white-hot fireballs. However there are a couple of (relatively) safe spots and once you've found these the ostentatious alien is much easier to cope with.

Level Two brings a new colour scheme, fresh backgrounds and even more adversaries, including the ground-launched armoured homing missiles and a type of alien that I can only attempt to describe as the bad bouncing bastards, because they are. And so on ad infinitum, apparently.

To reduce your chances of being blown into oblivion, so that this fate is something slightly short of inevitable, weapons pods appear along your way, spinning and bobbing and daring you to fly out of the least deadly flight path in order to collect them. The more you collect, the better the special weapon you are given.

These extras include the usual shields, homing missiles, rear-firing weapons and side-mounted weapons, all of which are then represented by icons running along the top of the screen.



Globules and rockets and spaceships and deadly scenery and there's more where this came from, matey.



The big bad pot-plant from the end of Level One gets the weedkiller treatment.



Every available weapon blasting anything that moves. You should survive for at least another thirty seconds.

GRAPHICS AND SOUND

The graphics are very polished. Chunky sprites fling themselves all over the screen above five levels of parallax scrolling background which takes the form of an esoteric bio-mass littered with rocks against a star background. It's possible to collide with some of this, but it's impossible to tell the safe scenery from the deadly.

The mood is set by a truly creamy opening sequence, an atmospheric title screen, some tension-building animation and a fairly adept rendering of zooming through more parallax star backgrounds. On-screen text varies from unoriginal but readable to Roger Dean with rivets. As for the sound, it hasn't suffered for the sake of the graphics. Explosions and gun/rocket fire are catered for adequately but there's some malevolent background music, especially in the title sequence.

LASTING INTEREST

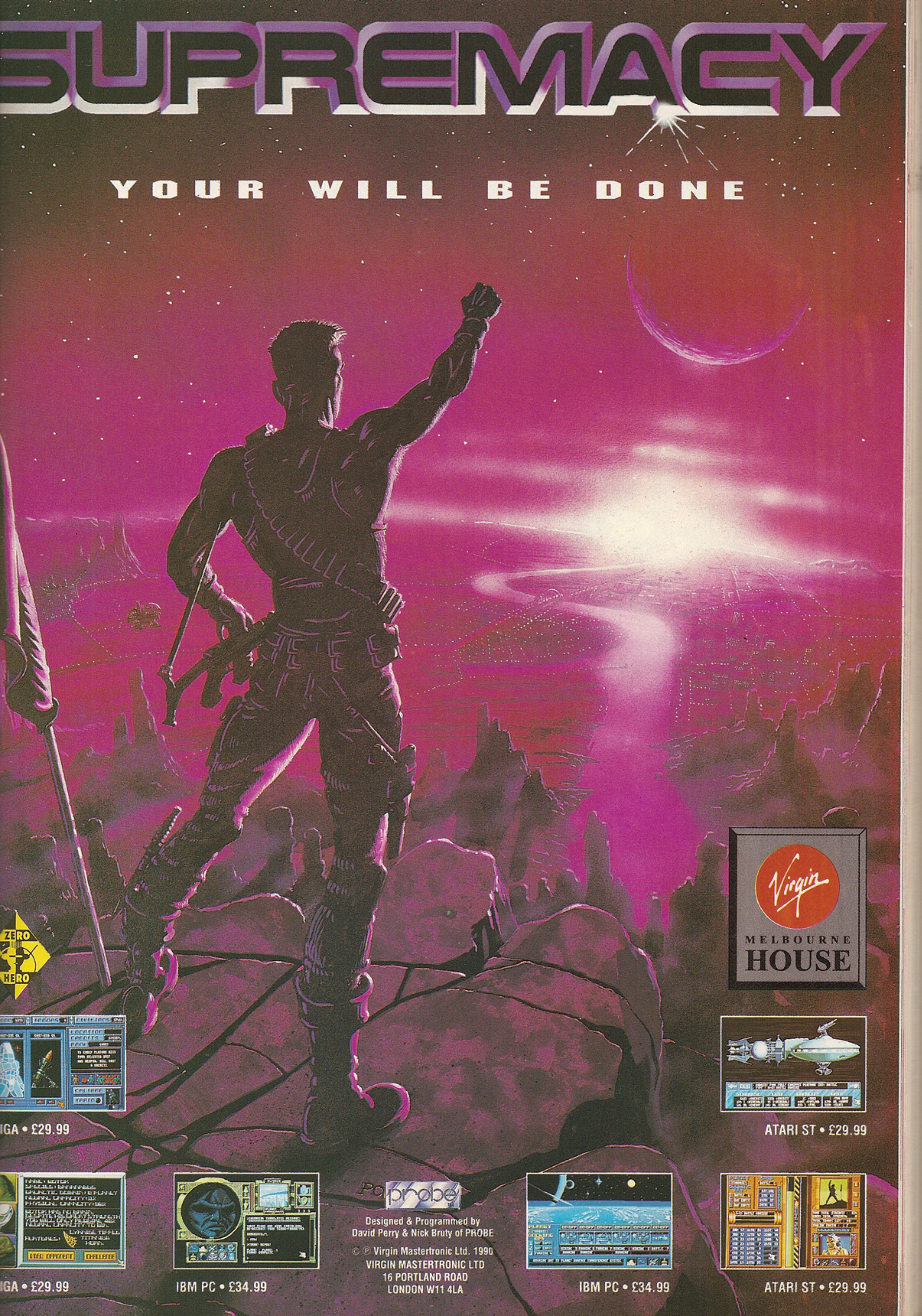
You play with credits, getting a number of lives per credit. Lives are instantly replaced when lost and the programmers have thrown in a moment or two's worth of invulnerability for good measure (the whole affair would amount to sheer carnage otherwise) but credits are offered during a ten-second countdown. Lose a life, by the way, and you lose any special weapons.

JUDGEMENT

It would have been a corker if only something more original had been the end result of all this work. The fact that it's well trodden territory has to leave you a little jaded, despite some of the wonderful finishing work. Other quibbles include questionable collision detection (though I'm assured the sprites themselves are "quite clever") and two apparently useless special weapons. But on top of it all, *Ziriax* is just too difficult. Only those who completed *Xenon II* stand a chance of seeing past Level Two and that's not just a shame, it's a mistake.

Sean Masterson

GRAPHICS	7
SOUND	7
INTELLECT	3
ADDICTION	6
OVERALL	68%


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Flip-it & Magnose
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COLONEL'S BEQUEST

SIERRA £34.95 ■

Mouse and Keyboard

Oh Sierra, you say, an adventure. Well hold it right there Mr (or Ms) Cocky Know-all. This is not an adventure, it is an interactive story. It is a play in eight acts. It is an animated version of Cluedo cunningly disguised as a remake of The Cat and the Canary, but this time without Bob Hope.

You play Laura Bow, a sweet southern belle with a penchant for snooping around places and saying things like "Tell the Colonel about Polly." or "Ask Ethel Prune about Fifi." Wadda gal.

As a change from studying journalism at University you decide to take a trip with your bosom buddy Lillian Prune to visit Lil's darling uncle Colonel Henri Dijon. (Get it? Dijon... Mustard!) The old duffer reads his will and upsets everybody in sight. Once the will has been read, boredom sets in and you decide to explore the house and grounds.

There is a mess of exploration to be done, so off you set around the mansion. To stroll around you could try using your mouse to move the animated character. Personally I found that using the cursor keys to move Laura was far more effective than boshing her into walls and tripping down stairs by way of the mouse.

Along the way you overhear dodgy conversations, attempt to communicate with Polly the parrot and pat Beauregard the dog on the head. You also get to change five disks and tear your hair out as, yet again, nothing happens. This is what it must be like for a real-life 20-year-old journalism student in a spooky mansion out on the bayou.

In order to gain information you use the right-hand mouse button, click on objects or people and read the description. This can throw up some interesting snippets or merely tell you that "There are many interesting artifacts in the room." The parsing here is not what you would normally expect from a Sierra game; it slips up irritatingly on occasions with only a very few standby phrases when you wander outside the game's vocabulary.

Without doubt there is plenty to be seen and loads of notes to take. You really do need to keep your stubby old reporter's crayon to hand at all times as you never know when you're going to walk into a room and find yourself ear-wigging a juicy conversation. In fact, walking into rooms uninvited produces more of interest than searching or looking. Keep your eyes on the good-looking fella with the bad attitude.



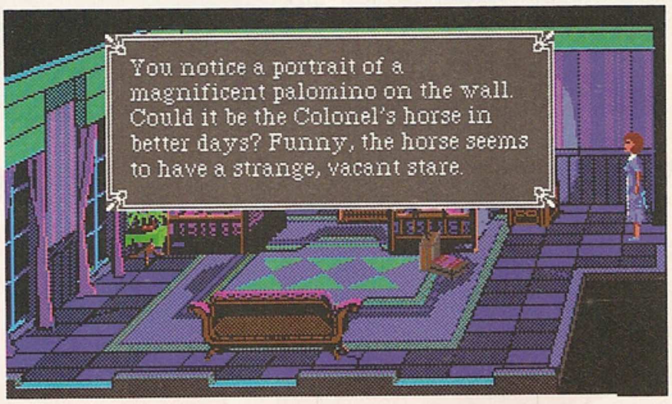
How did the colonel end up in a wheelchair? Why is Fifi the french maid looking so careworn? How will Laura find out and why does she even care?

GRAPHICS AND SOUND

Sound? Well, yes, there is some. A nice ticking clock and a pleasant 'Bong, Bong, Bong' of the timing clock which appears every so often. A few doors creak, when you go outside there's birdsong. Generally it's run of the mill. Graphically, it's no treat either. Obviously a PC port over, the colours make the word garish seem pallid and the word pallid seem insipid. All those moans noted, the backgrounds are atmospheric, the details are well worked and the parrot swings with great elan.

LASTING INTEREST

Pure bloody-mindedness after the first few fruitless plays should keep the avid adventurer coming back to crack the game and find something of interest. Names such as Dr Wilbur C Feels, Gloria Swansong and Jeeves the butler do give the whole thing a rather tacky feel but forget it and keep plugging away. Probably the most useful piece of kit to have with you while playing the game is a younger sibling who can be bribed with a Cadbury's Cream Egg to change disks while you nip off to the loo.



Laura discovers a huge board with writing on it. What can it mean? Well it's actually some very useful information. Tricky fellow (cos they won't let me say b**r) Johnny portrait.**

JUDGEMENT

If you enjoy Cluedo and don't mind a few hours in which three things (zip, nada and zero) happen, then *The Colonel's Bequest* could be for you. An immense amount of thought has obviously gone into the game and it does have a kind of frustrating charm about it. Unfortunately this cannot save it from being plain dull. Laura Bow refuses to look into bags, shelves, closets or people because they don't belong to her or contain nothing of interest. How can a game tell you what is of interest to you? Generally, it's a "Oh what a nice present, auntie Mick" rather than a "Look what I just bought, cousin Neil." kind of game. *Tim Smith*



Blimey! what's all this then? Maybe Fifi isn't a floozy, maybe she's a misunderstood genius of the ironing world. Laura's bound to find out

GRAPHICS	5
SOUND	4
INTELLECT	7
ADDICTION	6
OVERALL	60%

Nations have always fought for a place in the sun and, equally, for the 'glory of empire'. Unfortunately, these imperialistic tendencies are not limited to man: inhabitants of other star systems, supposedly more advanced, also crave the soil of other races and galactic supremacy.

Now you can take the reins of a newly-founded stellar civilisation and turn it from a one-planet backwater into an empire where the sun never sets (because you'll own the star, too). Four systems are yours for the taking consisting of 8, 16, 32 or (again) 32 planets.

In each region you face up to a different opponent whose own colonial management skill grows with the number of worlds he, she or it controls. As you start from the same position, but at the far end of the system, it's an even-money race for *Supremacy*.

Total power means concentrating on fifteen different tasks at once. Populations must be fed and taxed, but how little or how much is up to you. Ships and factories must be built and moved, carrying and producing the resources that fuel your drive for empire. Armies have to be trained, equipped and positioned, a process that erodes more of your wealth as the inevitable war looms. Messages must be monitored, as they contain vital information about your enemy's actions and fate – back





The primary control screen. Here you watch as a lifeless star is 'formatted' using an atmosphere processor (RIGHT) bought earlier. It allows a full view of the system you aim to control, and a brief run down on what's happening on each planet.



Each planet has its own monitoring screen. Here you have to power each production station and the all-important docking bay facilities.

room boys develop new star drives and fruitful crops, while comets smash planets and radiation storms erase civilisations.

Via icon-filled screens you monitor the whole process and so control your chattels. The main display outlines the status of each planet, while special screens give more in-depth detail on the economic, military, production and cargo facilities available. All are interlinked to promote speedy access between related stages.

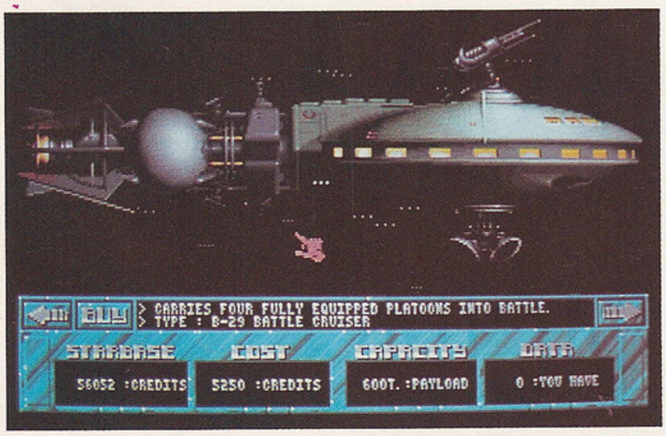
As the colonies spread your brain is gradually stretched to snapping point trying to keep track of shuttling ships, supplies and troops between stars. Thoroughness is demanded but is impossible to achieve. Ships are left sitting in the docking bays of starving planets, holds groaning with food. Battleships are sent racing towards new war zones entirely bereft of troops, as your mind locks up trying to cope with too much too fast.

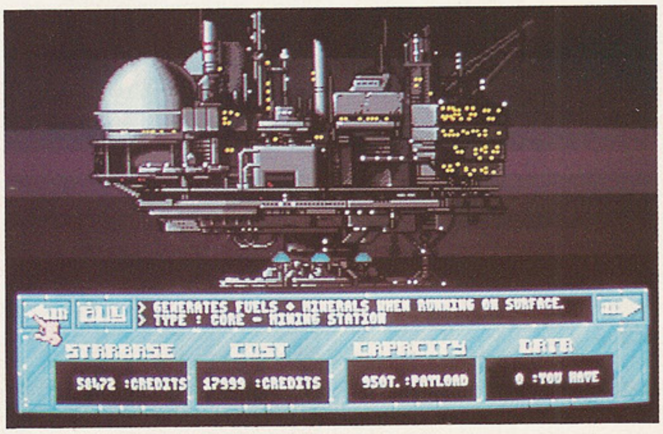
When the shooting starts, you know the race for supremacy is in the final straight. Are the troops well enough trained? Do they have the kit to see off the invaders? Or will an earlier saving on weapons haunt you? This is the challenge of *Supremacy*. Total power is yours for the taking and that's a powerful hook indeed.

VIRGIN £29.95 ■ Mouse

SUPRE

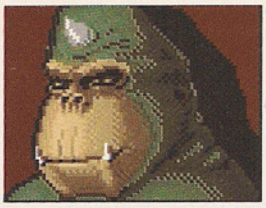
AMIGA GOLD FORMAT





By accessing the 'gold bars' icon on any screen you get the chance to buy some nifty new hardware. ABOVE LEFT is a battleship, vital for troop carrying. ABOVE RIGHT is a mineral production plant useful for things like minerals and fuel. Other goodies on offer include farming platforms, atmosphere processors, solar power collectors and cargo carriers. All play their part and each leaves a huge hole in the budget.











TOP LEFT and ABOVE LEFT are two examples of the kit on offer for your soldier boys, while BELOW is the one every fighting man wants, a nuke-proof suit! The other four charmers ABOVE and RIGHT are the men you are trying to beat in the race for galactic supremacy. On the right in red is Rorn, a fearsome opponent indeed.

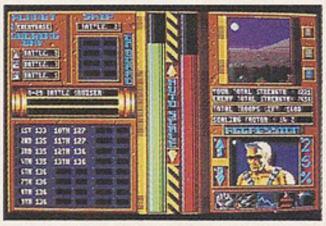








Once the army is trained they must be equipped, but good kit is also proportionately expensive.



When in battle you decide how frenzied your troops become.



Fly between the stars by selcting a ship and then clicking a destination. Simple!

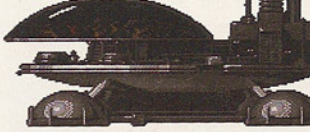
MACY

GRAPHICS AND SOUND

Essentially a management game, *Supremacy* should not, by tradition, look good. Yet while the gameplay is conducted via icons, the peripheral graphics give the game bite. The ships are glorious, the background screens informative and small windows around the screens feature animations which continually catch the eye. Backed up with a mystical intro and a gruesome outro, *Supremacy* has real style. Background sounds are there but add little, mainly supporting the peripheral graphics, and so cannot be expected to excel. When combined, though, they make this management challenge of galactic proportions easily understandable.

LASTING INTEREST

The four opponents increase in cunning and make life real hard. The first is little more than a trainer and is summarily seen off after a few wars. Number two and three are expert imperialists who really stomp the terra. The fourth is the 'man' to shoot for: resplendent in devilish scarlet, he knows and uses every trick in the book to gain control of 'his' 32-planet system. He's hard to beat with sneak attacks, forcing players to learn more devious economic tricks, just to survive.



JUDGEMENT

The scope of *Supremacy* combined with its easily accessible format make this one a must for megalomaniacs. The strategy's strong enough to engross even ardent armchair generals, but is instantly playable enough to win over arcade freaks too. Focussing on the few basics of life it makes ruling the stars a simple concept to grasp yet is hard enough to be real challenge. A classic science fiction dream you have the resources to fulfil: but have you got the power? *Trenton Webb*

GRAPHICS	8
SOUND	3
INTELLECT	9
ADDICTION	9
OVERALL	90%



Using his flaming sword the hero leaps into the battle against the lizard people. In this walkabout arcade adventure he must leap over rivers, bash bad guys and dodge incoming missiles. Luckily he may have his energy levels are replenished en route if the correct power-ups are collected.

UNREAL

UBISOFT £24.99 ■ Joystick

Hack, slash, slaughter, slay. In this ever-changing world, if there's one thing you can rely on it is an endless stream of sword-wielding arcade fantasies. *Unreal* is one such outing, but with the promise of eight levels, both 2D and 3D graphics and interactive music it could be a cut above your average hack-em-up.

First, though, the plot. Your name is Artaban, and you live in peace with your beloved, Isolde, your people and a friendly copper dragon called Dracus. Then one day Isolde is captured by the Master of Darkness, Polymorph, and whisked off to his castle lair, where he insists that she marries him. News of the wedding gets out, Dracus is horrified, tells Artaban, and the two zoom off to rescue the fair maiden.

The game's eight levels divide into three 2D ones and five 3D ones. Now the promise of 3D action sounds good and, indeed, the first level is one of the 3D ones. It's basically a prehistoric *Afterburner*, with the dragon sprite flying into a screen populated by trees, prehistoric monsters and rock outcrops, which sap your shield's energy, and power-up crystals, which give you extra weapons or short-term invulnerability. Play for a minute and you'll think even the first level's impossible: play for ten and you'll be defeating it every time with your joystick on autofire and your feet up.

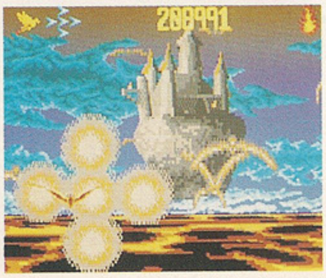
Level Two is where it starts to get interesting. It might only be 2D but it's infinitely better than Level One. Here you embark on a sideways-scrolling hack-em-up with lots of puzzles to sort out and some truly dazzling graphics. The same general principle applies – you have a shield which absorbs hits for just so long. When its energy gets to zero you're dead and it's game over time again.

UbiSoft have wisely built in a Save Game option, but loading a game actually dumps you into a special training mode where you can progress through the game but don't actually amass any points. The very same training mode is offered when you lose your one and only life, so you can get to see what you've missed, but if you want to properly complete the game you have to do it all in one sitting. Grrr…

After Level Two it's back to a 3D dragon-borne blast and then another 2D plod, this time through an arctic wasteland. Then it's back to the dragon… and so on. If it's all starting to sound a bit thin, it's made up for by the sheer size of the thing and the range of opponents and puzzles along the way.



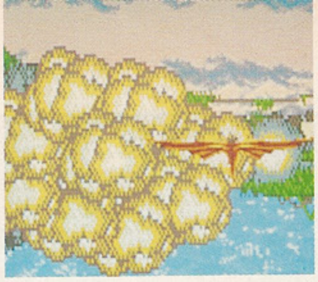
There's snow safe place in the world of Unreal. Not many good puns either!



Riding on the back of the dragon takes you into a shoot-em-up section which is a real toughie.



The dragon's breath acts as the blasters and the effects can be, well, devastating!



GRAPHICS AND SOUND

In the dragon-borne stages the graphics are not good, but in the hacking stages they are frequently stunning. The attacking beasties aren't always as convincingly-animated as they might be, but the landscape detail and effects are very good. The sound is a real mixed bag. Owners of half-meg machines just get a series of soundtracks which, apart from a rather nice title tune, are a cross between Jean Michel Jarre on a bad day and Stock Aitken Waterman on a worse one. If you have a 1Mb machine, though, you get sound effects too. On the dragon stages these are naff, on the hacking stages they are quite superb.

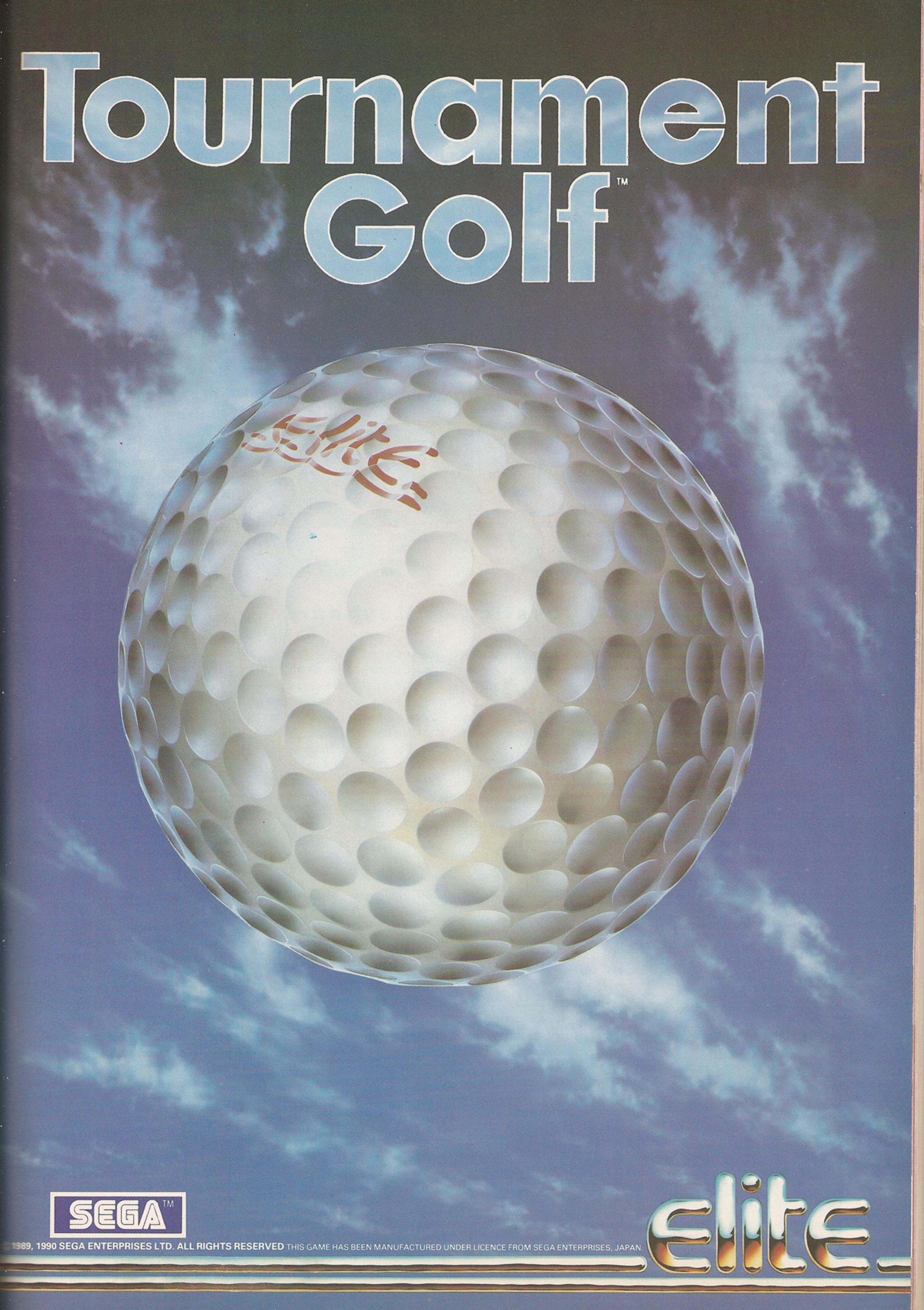
LASTING INTEREST

It's all a bit frustrating, what with tedious dragon-piloting to get through and only one life between you and a complete restart, but the graphics, sound effects (if you've got the hardware) and puzzles on the hacking stages will keep you playing. You'll rescue Isolde even if it takes you every night for a month (and it probably will).

JUDGEMENT

You don't often get a game showing such a variety of standards in its different sections. The 3D dragon-flying parts make up five of the eight stages, but about one per cent of the game's fun factor. The real game is in the hack-em-up stages, but even here it takes a 1Mb machine to handle the sound effects. Players with more between their ears than the average psychotic will find the puzzles a welcome relief from the charnel-house style of most hack-em-ups. All in all, a game of two halves. The dragon stages are graphically grim, tedious and undemanding. The hacking stages are often graphically breathtaking, challenging and addictive. This is one you'll both love and hate. *Rod Lawton*

GRAPHICS	4/8
SOUND	6/9
INTELLECT	6
ADDICTION	8
OVERALL	74%


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Brad the lad sallies forth on level one. One of the lesser dangers here is the huge snake that concusses but rarely kills. Unfortunately the serpent appears to be bullet proof and good timing's needed to get past him. Watch out for those other snakes in the grass though, they need to be shot. Brad has three lives, loads of ammo at this point (see staus bar, bottom left hand corner) but they won't last long. It's like a jungle out here!

GOLD OF THE AZTECS



US GOLD £24.99 ■ Joystick or Keyboard

Down and out in Mexico and Tijauna. That's the fate of war hero Bret Conrad. Penniless, he's forced to hang around his Uncle's pad soaking up the sun. But when the old buffer kicks the bucket, Brad does as any devoted nephew would: he ransacks the place, nicks the ancient Aztec treasure map and throws a party.

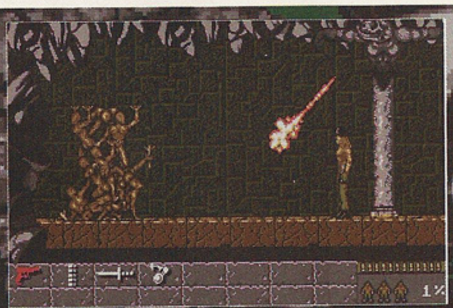
The morning after he jets down to the South American jungle aiming to steal the Aztec gold. That's where you take over. Armed with the 400-year-old map, a machete and an automatic pistol, Brad's yours to guide through an adventure that makes the Last Crusade look like a trip to Tesco's. In his way stand angry Aztecs, garish ghosties, terrifying traps and more alliterative antagonists than it's safe to say. Essentially an arcade adventure, *Gold of the Aztecs* boasts bigness and clever coding. However, what they don't tell you in the blurb is that it's unfeasibly tough.

After cutting Brad loose from his snagged 'chute the danger's obvious, namely little head hunters and huge elephants. Hot on the heels of these come spitting vipers, man-eating plants, nut-throwing monkeys and collapsing bridges. Not a good start.

Needless to say, life gets ever more hazardous for the all-American grave robber as he progresses through the levels and nears the temple complex. There are remote crossbows set to shoot thieves, man-eating locusts, falling boulders and enough poisoned spikes to make a grown man weep.

Each screen of this flick-scroll adventure has its own distinct peril. The gold of the Aztecs has lain undisturbed for nearly half a millennium and only a fool or a courageous hero would dare to disturb them now. So which do you want to be?

There's one major problem with Brad's quest for Level Five and the gold of those pesky Aztecs: Brad himself. His movements are strange, a feature that gives the game a bit of personality, but they're also extremely hard to control with any degree of accuracy. Which makes negotiating the virtually pixel perfect traps a pain in Port Two. You know just where it's safe for the lad to stand, you know exactly how to get the boy there. Can it be done? Can it heck! Only with luck and not with judgement, especially when he's trying to grab ropes, ladders and other lifesaving accoutrements.



Hmmm, now to admire this prime example of pre-aztec sculpture. Brad has to get past the fire breathing staute.



Brad has made a little errorette, and is about to join the conquistador as a permenant house guest in the lost temple.

GRAPHICS AND SOUND

Let's face it, Brad has an incredibly silly walk. Not content with just putting one foot in front of another he has to go and put his whole body into the act. The animation has inspired moments of silliness which owe more to Mr Benn or Crystal Tips than Disney or Bluth.

Amusing and annoying simultaneously, the graphics don't cause many giggles as Brad falls to his death for the 13th time in the same place. His movement exhibits a few massively annoying factors that have no other purpose than to peeve. He also has a tendency to move unexpected ways, as joystick commands have to be perfect: not close enough, not virtually precise, but perfect.

LASTING INTEREST

If you like the hard stuff and dying billions of times then get stuck in. If you have low frustration tolerance then steer well clear or your monitor will have a fist-sized hole in it. Once into the game, though, the effort you've already put in commits you to continued play. You have to get some return on your investment of man-hours spent playing the *damn thing.*



Shooting the loose rocks avoids a fatal headache.

JUDGEMENT

Gold is a great game – there's masses of traps to avoid, loads of puzzles to solve – yet its appeal is distinctly limited. Only those who like their games with a mean streak a foot wide should contemplate taking it on. The graphics are distinctive and deceptively approachable, but don't be sucked in. The Gold of the Aztecs is as safe as houses that have been encased in concrete and hidden rather cunningly in the deepest vault of Fort Knox.

Trenton Webb

GRAPHICS	8
SOUND	6
INTELLECT	4
ADDICTION	7
OVERALL	73%



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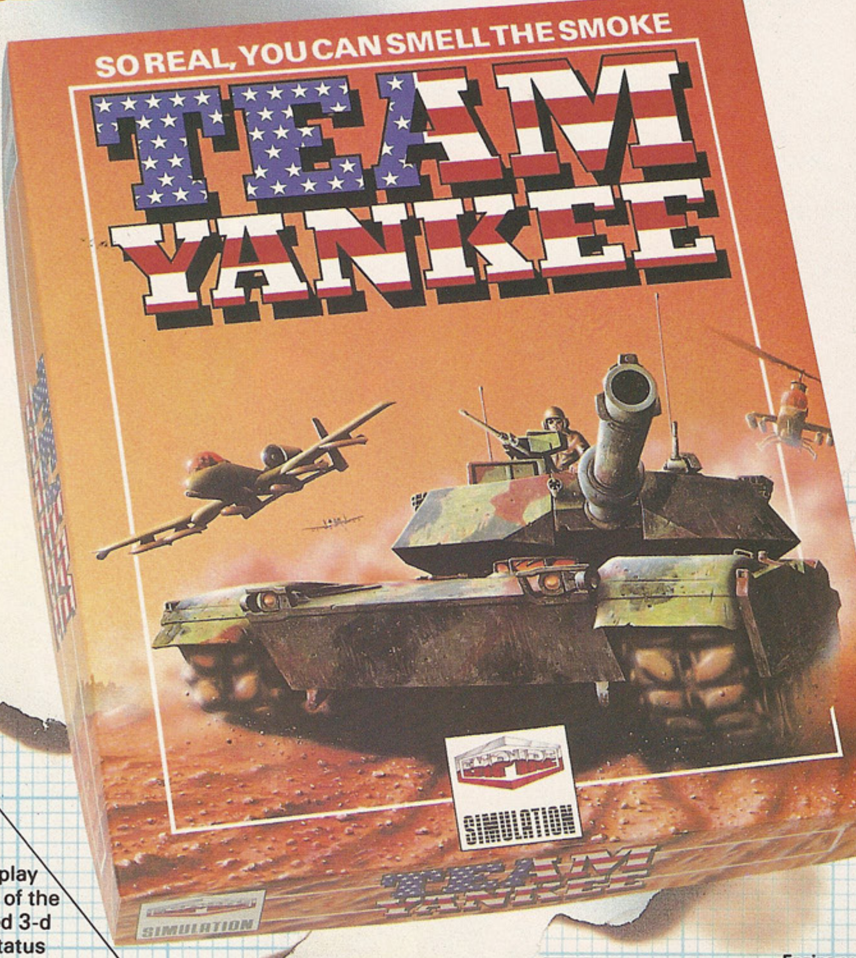
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SO REAL YOU CAN SMELL THE SMOKE

THE NO.1 NEW YORK TIMES BESTSELLER

"ROMEO 25 - THIS IS MIKE 77 - SPOT REPORT - 5 T72 TANKS MOVING WEST - GRID 190852 - CONTINUING OVER"

Capt. Sean Bannon snapped his head to the left. There was only one place where the Russians could be, and that was on the hill 2200 metres away. All the training, planning and preparations were over. Team Yankee was about to learn if the team's seventy nine men and twenty five million dollars worth of equipment could do what they were supposed to do.



Team Yankee is designed to test your leadership and tactical skills to the quick. You can display in either **"quadrant mode"** where all four platoons may be controlled at once.

or

Full-screen Mode where the display homes in on just one platoon.





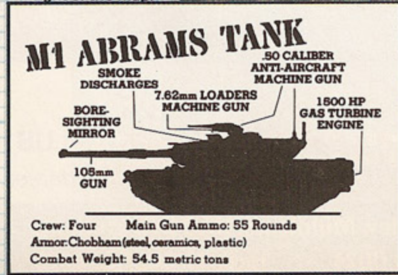
You have the flexibility to display either an overhead map view of the surrounding area, a simulated 3-d view of the battlefield, or a status screen showing the performance of all vehicles in a platoon. Irrespective of which screen mode you choose during battle, there is a constant column of information to the right of the screen.

To the right of the compasses are five icons which represent the various types of **weaponry** available to the unit.

- **MACHINE GUN** - which is always available to the player and has an 'infinite' number of rounds.
- **SMOKE** - a smoke grenade which allows enemy vision to be obscured.
- **HEAT** - a high explosive anti-tank round
- **SABOT** - an armor-piercing tungsten shell
- **TOW** - a high-range anti-tank missile

The major capability on the quadrant map screen is to alter the movement and formation of any platoon. The whole of the map may be viewed at once, or you may zoom into any portion of the battlefield using the icons to the right of the map.





Team Yankee is the definitive action simulation of modern tank warfare. Watch scenarios unfold on 3D battlefields with high definition graphics and keep track of the four tank platoons you control using the unique 4 quadrant display. Defend Hill 214 from Yuri Poteckno v's crack tank platoons, attack Objective Link through sniper fire from forests, protect the Langen Gap from an entire Soviet tank battalion at night!

Five major scenarios based on the battles featured in the New York Times No. 1 best seller Team Yankee.



Engine smoke will prove very useful in conf... your enemy if ... find yourself i... tight corner.

Rotation icon ... compass disp...

Infra red (or thermal) **imaging** This feature is very useful for identifying vehicles camouflaged on the edge of forests. Contary to popular belief the thermal image is green and not red.

Zoom. When this icon is accessed the central portion of the screen is magnified by a factor of 10.

Laser range finder. The ran... finder will lock on to a refle... target if the firing cursor is placed directly over the obje...



Wide formation icon. increases the spacing between vehicles in yo... platoon to 100 metres.

Narrow formation ico... This reduces the inter-vehicle spacing in your platoon to 50 metres.

Vee. a vee formatio...

Echelon left - place... vehicles on a right t... diagonal relative to ... direction.

Wedge - places you... vehicles in a wedge formation.

Scroll icon: The four arrows underneath the ETA display allow you to scroll your map in any of the four directions.

Dead Stop icon. This red icon, causes your platoon to come to a dead halt when clicked.

In line - places your vehicles in a line abreast relative to your direction.

Column - places your vehicles in a line ahead relative to your direction.

Echelon right - places your vehicles on a left to right diagonal relative to your direction.

EMPIRE SIMULATION

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The Professor drops a teleport pod by the cave. He still needs transport to another screen though, so maybe that nice passing pterodactyl can lend a hand, or a beak, or a claw or something.







TIME MACHINE

ACTIVISION £24.99 ■ Joystick and keyboard

Professor Potts has a little problemette. While he was working on his time machine terrorists attacked, smashing his temporal moped and whisking him down the time lanes into prehistory, to a time so long ago he'd have to wait 10 million years just for Racquel Welch to get her fur bikini out.

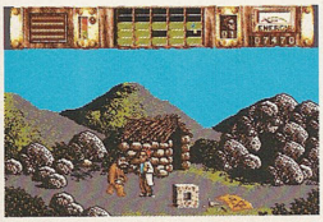
Luckily he'd tucked five teleporters and a stun gun in his pocket before the attack, with which he must find his way back to the present. The solution is not so much revolutionary as evolutionary: by guiding the lifeforms he encounters, he can open the right time corridor and get himself home before he left!

The five zones include 1 million years BC, when the dinosaurs ruled the earth, the Ice Age and the Middle Ages. In each he must alter the status quo so that evolution takes its course. Successful completion opens up a time lane forward to the next stage.

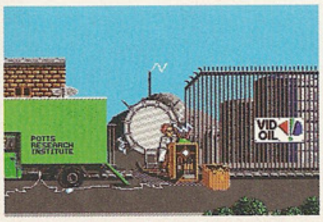
Each task involves giving mother nature a nudge in the right direction. In the prehistoric zone the job is to ensure mankind actually happens in the first place, while the resultant cavemen need a little advice on the tech spec of the wheel. To lend a hand the Prof has to teleport and then move objects into new places so the inhabitants get the idea. Move the right ones and the zone indicator flashes from red to green. What's more, when the majority of the current level has been correctly altered the next age is accessible.

The central paradox of *Time Machine* stems from the fact that even when something's fixed, it's not. At any time it can revert to the old state, which threatens any future dependent on this earlier time for existence. Using an on-screen zone indicator Prof Potts has a view of all the 25 areas he controls. If something goes awry he has to leap time and fix it. As more of the future opens up to Potts, like a plate spinner, he must try to keep the earlier ones safe.

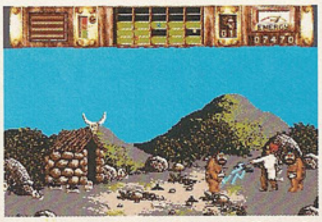
The professor has three lives and little energy. His life force is sapped by standing in puddles of ice water or being blatted by a volcanic fire and is refreshed by eating any fresh fruit he finds. The only time limit is that of time itself. Confused? You will be.



"Well Mr Magnon, wheels must be round". No good just telling him, you have to show him how



In the beginning there was a Time Machine, or there was until Abu Nidal and friends appeared.



The stun gun helps to disuade any unwelcome followers. Be careful though, it may overheat.

GRAPHICS AND SOUND

Time Machine is a cartoon adventure packed with cute creatures, caricature people and comic historical backgrounds. The godlike Prof moves in a slightly mysterious way and takes some joystick practice to control, but does everything required with a quick waggle. The limit of only five screens per time zone is no drawback, because you see it five times over the millennia. The 25-screen indicator makes every zone easily monitored, if not controlled. The tune's a cute overture that demands shutdown after a few minutes, or changing to the effects option at the first opportunity.



A fire could help keep out the cold, but you need wood and where would you get that?

LASTING INTEREST

The puzzles which free up each respective temporal zone are reasonably obvious, but it's the changing and keeping them that way which is really hard. It's all too common to be virtually home and have a hundred thousand years of hard toil spoiled in seconds. It's a chronological balancing act and that challenge remains, regardless of previous success. A real hair-tearer, *Time Machine* is relatively finishable in theory, but we all know what a complex theory relativity is.

JUDGEMENT

Time Machine is not a big game but a clever one, packed with playability and originality. It will have you chasing over hill and dale madly plugging holes in the temporal stream, but there's actually too much time to cover and not enough Professors. It gets under the skin by appearing feasible, even easy, then proving to be exactly the opposite. Nothing, not even the most advanced technology, staves off the ravages of time.

Trenton Webb

GRAPHICS	8
SOUND	4
INTELLECT	7
ADDICTION	9
OVERALL	85%

GRAPHICS AND SOUND

Puzzle games generally tend to go for one of two themes – either as a surreal experience with psychedelic graphics and ambient sound or with a cute appearance and a jolly soundtrack. *Plotting* goes for the latter, with the player controlling a blobby little blokey strutting his stuff across some well-drawn, colourful backgrounds to a cutesy, jangling backing track. Fortunately the music can be turned off, as even the most jolly game player can only stand a certain amount of plinkity-plinkity-plonk tunes.



Player one (left) has found themself with no legitimate move and uses up one their three lives with a miss. Player two however gets a bonus for clearing three tiles in one go. Cue childish boasting etc.

PLOTTING

OCEAN £TBA ■ Joystick

Puzzle games seem to staging rather a comeback, what with *Welltris* and *Block Out* last month and the surreal *Extase* this month. Things are definitely veering towards the cerebral.

Ocean's foray into the scene appears in the form of *Plotting*. You play a small, brown, blobby creature called an Amsha. The game is played in a series of ornately-patterned rooms with blocks stacked in the corner.

The idea is to eliminate the blocks until there's only a specific number left. This is done by throwing a block into the pile, but only blocks displaying the same design and colour as the one you are throwing can be destroyed. Once the block you have thrown has clattered through the pile killing blocks it matches, it is replaced by the block behind the last one destroyed. This new block is thrown back to the Amsha ready for the next attack.

The pile can be tackled directly from the side or by bouncing off pipes and pieces of masonry so that the blocks fall into the top of the stack, thus giving you a number of attack options. If there is no way that you can hit the required target block, then a miss is chalked up and you are given a 'magic' block which acts as a wild-card, allowing you to destroy blocks of any type. If you run out of the precious magic blocks, which acts as lives, the game comes to an end.



'X'-ceptional, player one finally gets their act together and scores a single.



The DIY level section, where you choose your own nightmare!

LASTING INTEREST

Despite the compulsive action, the levels don't change too significantly from one to the next. The gameplay remains pretty simple and repetitive throughout and after playing for about half an hour will probably seem a tad boring. But leave the game alone for an hour or two and you soon find yourself booting it up again for a quick block-flinging session! Even if you do manage to steam through the levels, there's a construction kit for you to build your own screens – and designing devilishly difficult puzzles is almost as complicated as actually solving them!

JUDGEMENT

Despite the rather daft title and overly cute appearance, *Plotting* is actually an intriguing and compulsive little puzzle game. The concept is simple enough to get into, but you still have to keep your eyes open and your mind on every move to complete the levels successfully. Getting complacent on even the easier levels is a sure way to a quick defeat! These days it's difficult to come up with new computer puzzle ideas, but *Plotting* is certainly original and highly playable to boot! *Maff Evans*

GRAPHICS	6
SOUND	4
INTELLECT	5
ADDICTION	7
OVERALL	81%

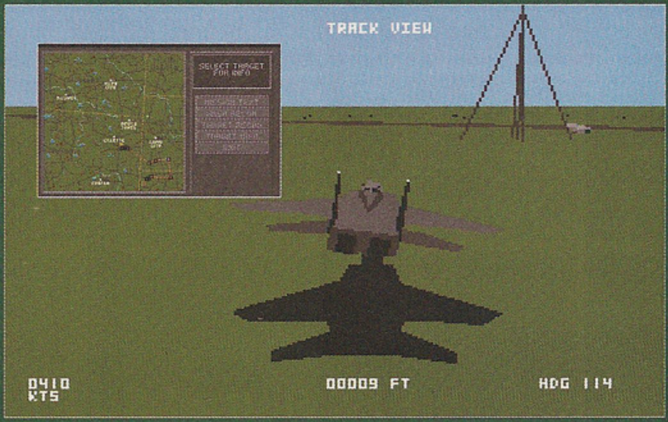
FIGHTER BOMBER ADVANCED MISSION DISK

ACTIVISION£14.99 ■ Joystick and Keyboard

Budding Curtis Le May psychos out there who've flown their Fighter Bombers into the ground (figuratively and literally) can take to the skies once more with the *Advanced Mission Disk*. You need the original game – *Fighter Bomber* – as all missions and no planes makes Jack a dull boy. Even if they are 16 of the most ridiculously hard combat sorties every devised.

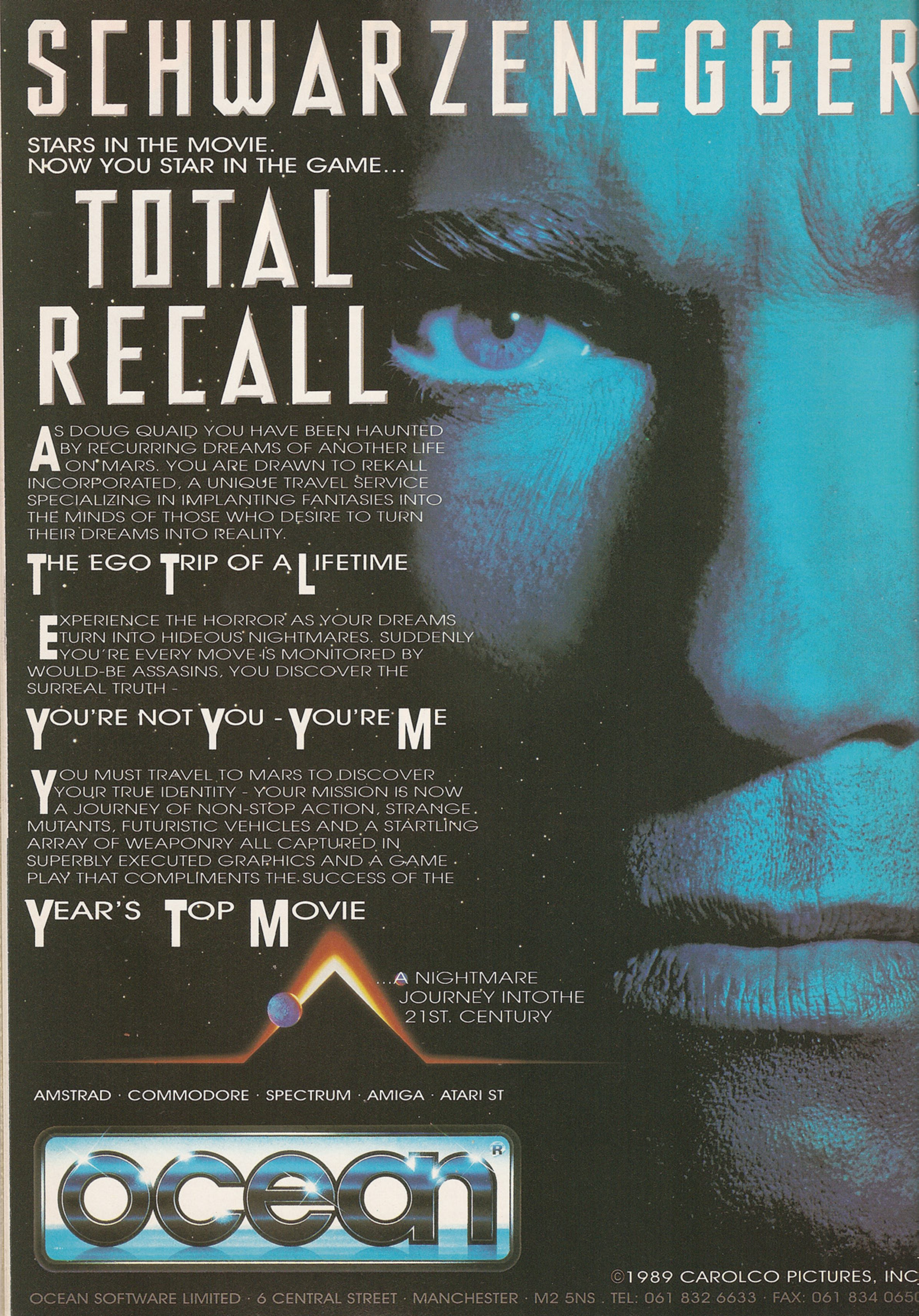
The new features include improved land furniture with in-depth shots of parked jets and radar towers. What's more, many missions don't allow a re-arm/refuel stop-over so you must overcome a missile to enemy ratio of 1:2 or worse! You even have to guess which enemy are mission targets and which ones are cannon fodder.

The graphic improvements aren't that stunning but the insane difficultly levels are. It's a supplement disk only for those with a distinct liking for pranging jets or who are budding Chuck Yeagers. It would be better if you could fly the missions in any order, but they follow sequentially, so many will never get their money's worth. But if you enjoy raining death from the skies, though, scramble! *Trenton Webb*



Trying to complete the monumentally tough missions (see inset) often proves impossible, so a little light relief in the form of low level, high speed 'divine wind' tactics come into play. If you can't manage to get the radar base with guns, bombs or missiles then ram it!

GRAPHICS 8 / SOUND 7 / INTELLECT 7 / ADDICTION 5 / OVERALL 71%


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YOLANDA

MILLENNIUM £24.99 ■ Joystick

About half a decade ago, a strange platform game appeared on the 8-bit machines. This game looked crude and sounded dire but managed to pick up a strong following. It pitted the player as the mighty doer of mighty deeds, Hercules. Years later, the game has been moved to the Amiga.

You play Yolanda, daughter of Hercules and general gorgeous blonde, who has been cursed by the evil goddess Hera. Hera is extremely envious of Yolanda's lithe body, flowing blonde hair and curvaceous... (that's quite enough of that, thank you!) and has placed a curse on her, which decrees that anyone who falls in love with her will die within a week. Unless Yolanda manages to repeat her father's prodigious effort of solving twelve great tasks.

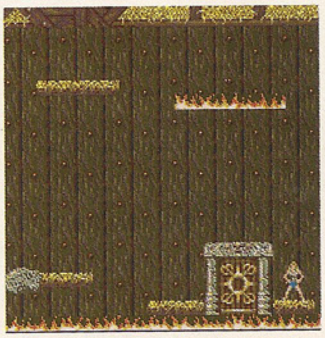


Our heroine has leaped off the now burning platform below and has to swing across those vines.

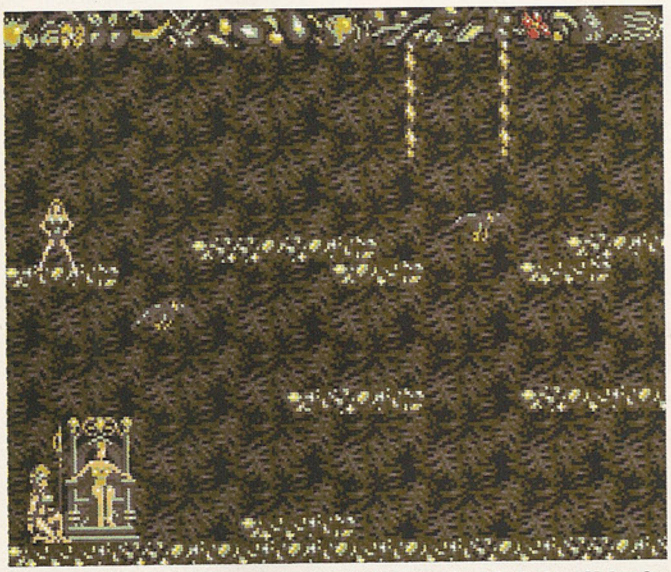
In the game, each task must be completed by negotiating a series of platform-filled screens in an attempt to reach a goal. Various hazards block the way, such as venomous spiders, deadly crabs, combustible platforms and precarious vines. If the goal of one screen is reached, the next screen of that task appears. If, on the other hand, Yolanda falls foul of the terrible dangers involved, then she is given a chance at one of the other labours.

GRAPHICS AND SOUND

The spites and platforms in *Yolanda* are remarkable. Not due to the detail, nor the animation. What is really incredible is the size – they're TINY! This wouldn't be too bad if the positioning required wasn't so precise, since the miniscule Yolanda can all too easily miss a spindly vine by inches and plummet to her death in the fire pit below. How frustrating? The soundtrack is racy enough, though, with some pretty powerful instruments being used, but it still seems a tad out of place with the mythical background to the game.



Yolanda has made it to an exit door – a rare occurrence.



The exit door is the throne on the platform directly below Yolanda, but is it going to be a simple task of dropping off the platform and running left? I should coco an' all – you'll have to take the long route.

LASTING INTEREST

***Yolanda* starts off by being an incredibly difficult game, and proceeds to get harder. Only those with a plethora of platform game completions under their belts will manage to get any distance with the game, whereas the part-time player will more than likely destroy her or his computer, joystick or monitor (delete as they collapse) before abandoning the game completely as just too frustrating and too dated in its concept.**

GRAPHICS	3
SOUND	5
INTELLECT	2
ADDICTION	1
OVERALL	49%

JUDGEMENT

Platform games do need to have a considerable amount of challenge, but when the game is as frustratingly hard as *Yolanda* then things are going too far. The appearance is a little on the dodgy side, with tiny sprites and bland backgrounds, which makes playing the game extremely difficult. Even if you're a hardened platform fan, *Yolanda* may still be too much to handle, making the air turn blue as you stretch the old rude-word glands to insult the game for the umpteenth time. Classic or not, *Hercules* is an outdated and over-plagiarised game. *Maff Evans*

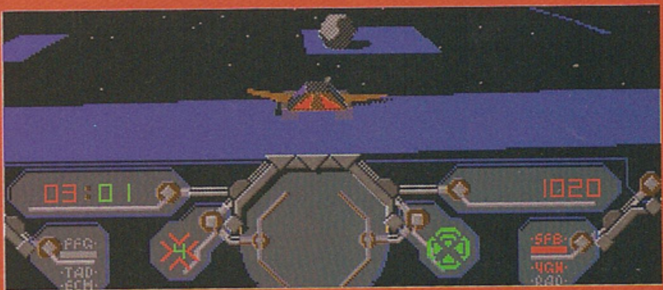
SIMULCRA

MICROSTYLE £24.99■
Joystick or Keyboard

You want action? You want high-speed 3D blasting? You want huge mazes filled to busting with tanks, aircraft and gun towers? You want *Simulcra*!

You drive a half-plane half-tank around a battle matrix enclosed with a force shield. You can't cross the barriers until you've destroyed the generators that control it. Then the force wall collapses and you can get to the next section.

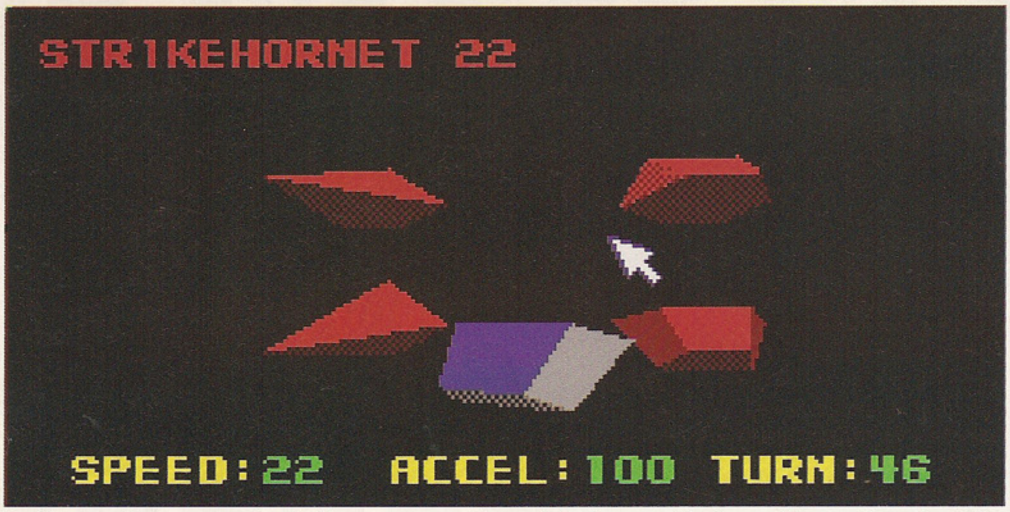
At any time you can switch between plane and tank, just unfurl the wings and you can fly above the battle zone reaching the unreachable power-up pods that result from the aliens' deaths. The floor hangs in space, with small platforms floating in nothingness all about the game area. You race around the current area looking for generators and collecting extra firepower.



The tank takes to the air with its wings unfurled and tries to pick up the pod ahead that was left behind after blasting an alien.

The joy of *Simulcra* is the speed and confusion. Using the tank as centre point for the 3D landscape, the whole game's exceptionally quick. So fast that seconds after staring at the map you'll be totally lost again on the giant grid, where you win with trigger speed, deft movement and firepower. Load up those fire and forgets, boys, lock on that HUD it's time to access the battle matrix. *Trenton Webb*

GRAPHICS 9 / SOUND 5 / INTELLECT 7 / ADDICTION 8 / OVERALL 80%



Gentlemen start your engines! Choose your craft carefully because it stays with you throughout the whole game. Some are faster, others turn faster, but for starters you can't beat the Thunderstike 18.

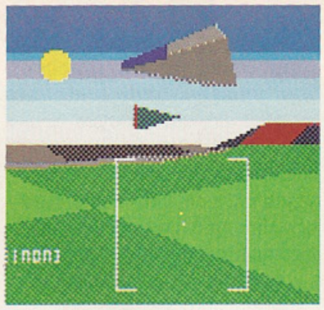
Smile, you're on candid camera – 23rd Century style. Live and unedited from the Thunderstrike arena comes the greatest show in space. Here pilots face death and destruction to entertain the eager millions who lust for action, thrills and spills.

Thunderstrike is a TV combat show where heroes fly fighters for fun and profit against drone ships that kill for real. As a pilot, protecting your own power installations and destroying the drone generators is the aim of the game in a fifty-stage dogfight to the finish.

The battlefield is composed of gullies, pools and hills over which you hunt the dreaded drones. Their generators are easily spotted, huge chequered pyramids rising out of the floor. Until blasted they churn out nasties, each of which has a special way of terminating your TV contract. Some try to shoot you, others ram, while the worst of the bunch sit above your own installations sucking power until they collapse.

Each area is played ten times, with the generators and installations in different positions. At all times the position and status of the installations are available on the HUD, with lock indicators flipping up when a drone falls within range – vital information that is complemented by a map that shows where the enemy is hanging out.

When you've blasted, blatted and blown yourself to victory, your performance is judged. As *Thunderstrike* is a game-show, you need to have done the biz, pulling in the viewers with a high kill ratio. Fight well and your craft is uprated for the next round, defend badly and it's downgraded. Add this to the bundle of power-ups that fall from drones during battle and in no time you can be porky enough, fast enough and agile enough to rule the ratings roost.



The HUD warns of incoming foes. In the distance a drone generator glows red and blue.

LASTING INTEREST

Thunderstrike is a 3D shoot-em-up with a neat twist in the attack and defence strategy. Flying any of the ships takes some getting used to, especially the quick turners, but after a few games the whole thing is second nature. The other controls take a little familiarisation too, but the correct strategies soon become apparent. As the levels progress the generators get more numerous while the installations are spread further afield. Abilities such as track locking – which allows high speed travel around the arena – must be used to make the grade. *Thunderstrike*, however, remains an into-the-screen blaster battle with twiddly bits. Great fun in the short run but only for the massively vicious and star struck amongst us in the long term.

THUNDERSTRIKE

MILLENNIUM £24.99 ■ Mouse or Keyboard

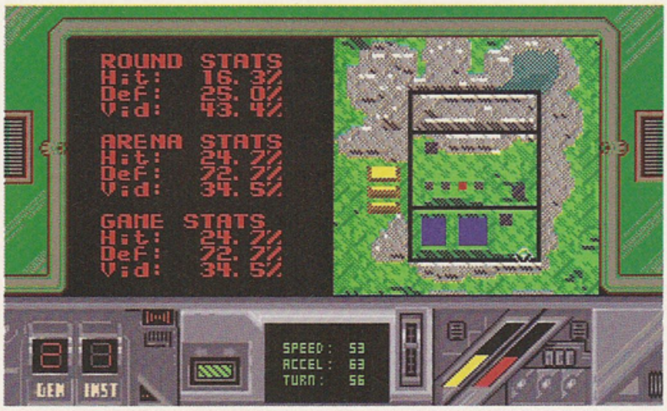
GRAPHICS AND SOUND

Thunderstrike looks well weird. Following the TV theme you only see you ship from behind and it's tracked by a remote camera. When things get seriously heavy, it's common to lose sight of yourself as the camera struggles to keep up with the action. The playing area is a 3D polygon world, with colours changing for each arena. Occasional glitches momentarily surprise, with drones appearing in walls, but when the palms sweat and battle is joined there's no time to care. Sounds are limited to a tacky Cap'n Nemo theme that screams to be turned off in favour of the far superior effects the picosecond the game hits the screen.

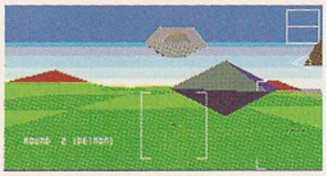
JUDGEMENT

Thunderstrike is fun: swooping low, flying fast and firing first. The TV concept adds solidity to the game, giving you a reason for this excursion into the death zone. The 3D is quick and convincing, the ship handles well and there's enough action to keep pilots busy well into the night. The addictive factor fades after a few rounds as there are only so many ways to win, so many chances to take, in the same arena. The development of the ship adds staying power, but the improvements aren't that noticeable as the increase in performance is only gradual. Despite this lack of longevity, *Thunderstrike* is still worth watching. *Trenton Webb*

GRAPHICS	8
SOUND	5
INTELLECT	4
ADDICTION	6
OVERALL	77%



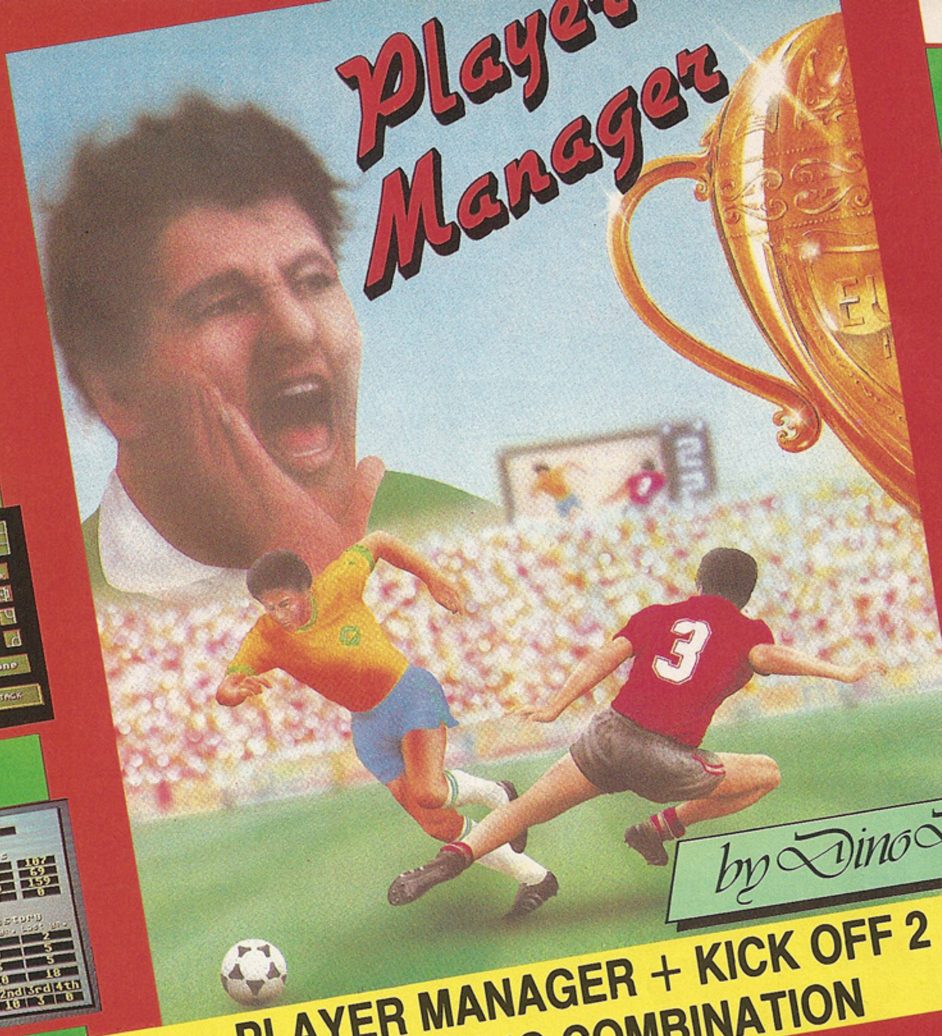
The map tells the tale of the tape. The small red square is your last remaining generator, the large grey squares used to be drone generators. The 'T' symbol shows where you are ie lost!



The blue diamond ship will destroy your generators. Get that sucka now, or you'll be sorry!



Your ship (the white one) nears a black 'tracklock' channel, useful for high speed dashes.









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ST ACTION: The presentation has to be the best I have ever seen in any management game. Combining the compelling game play of Kick Off with the strategy of team management was a stroke of pure genius.

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THE ACE: The beauty of the Player Manager is that it successfully blends a challenging soccer management game with the frantic end to end arcade action of Kick Off. Designers have been trying to marry arcade footy with management for years-almost always failing abysmally. Player Manager brings it off in style.

NEW COMPUTER EXPRESS: The sheer depth of Player Manager is incredible. Almost every conceivable element of running and playing in a football team has been implemented including Kick Off. Anco has produced what has to be a difinitive Manager game.

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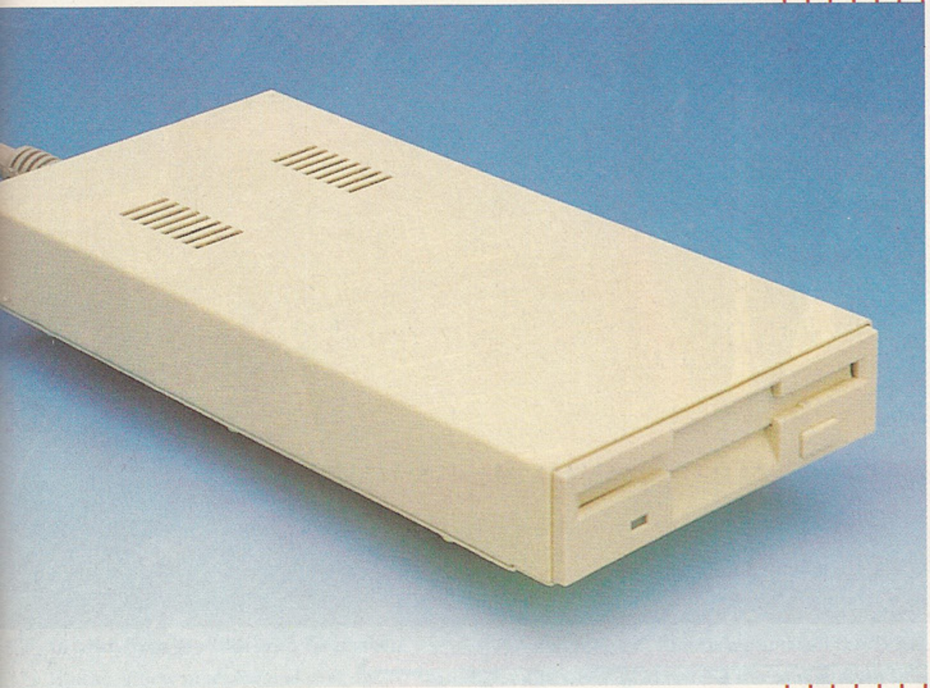
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Electronic Zoo are best known for their games like *Battle Squadron* and *Treasure Trap*, but they also produce a corking 3.5" external disk drive for the Amiga, complete with five games as well. Ordinarily this bumper bundle would set you back well over 100 notes, but we've got five of the packages to give away for nothing.

These sleek second drives are fully compatible with the Amiga 1010 drive but smaller. It has a nice long interface cable, a connector for additional drives, it's powered by the Amiga's own power supply and has its own on/off switch. The five games that accompany it are: *Impact*, an addictive *Breakout* game; *Exolon*, a colourful arcade blast-em-up; *Super Huey*, a classy helicopter simulator; *Goldrunner*, the oldie, speedy shoot-em-up; *Leatherneck*, hectic four player blasting action.

All you have to do to stand a chance of winning one of these five drives is to answer the zoo-related questions below. So get cracking and get those cards in to us.

ZOO GAMES

Look out for a veritable torrent of games from Electronic Zoo this fall. First off the blocks is *Xiphos*, a space trading game with a distinctive combat edge. Following this is the most original football game ever because Electronic Zoo have the rights to produce the *Subbuteo* game, bringing all those childhood memories flooding back – and aching fingers to boot. Towards the end of the year they will be publishing an epic space adventure entitled *Eco Phantoms*. With Jules Verne style graphics and thought-provoking plot it looks to be a biggie. With *Prophecy 1 – the Viking Child* and the Future Classics compilation which are already available, Electronic Zoo look set to establish themselves as one of the young contenders on the Amiga games scene.

HOW TO ENTER

Write the answers to the following three questions on the back of a postcard or stuck-down envelope and send it to: Electronic Zoo Comp, *Amiga Format*, 30 Monmouth Street, Bath BA1 2BW. The entries should reach us by October 17th and don't forget to include your name, address and phone number on the postcard.

QUESTIONS

1. What sort of animal is a 'bush baby'?
a) Rhino
b) Lemur
c) Lizard

2. What is special about the chameleon?
a) It has no sense of style
b) It can re-grow its tail in six hours
c) It changes colour to fit its surroundings

3. Who directed the film 'A Zed and Two Noughts'?
a) Johnny Morris
b) James Herriot
c) Peter Greenaway

RULES

Employees of Future Publishing and Electronic Zoo are not allowed to enter. The judges' decision is final. No correspondence will be entered into.

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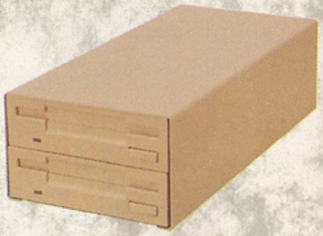
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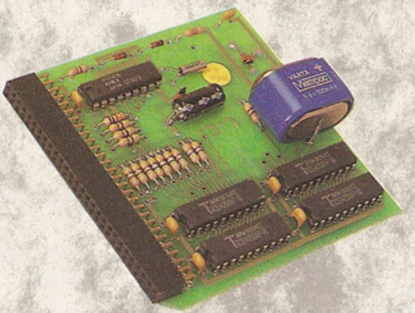
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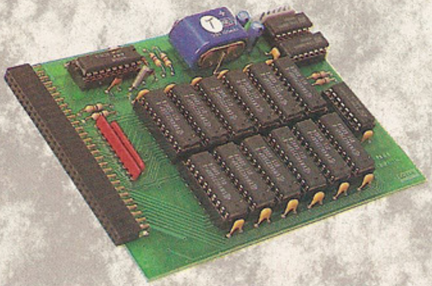
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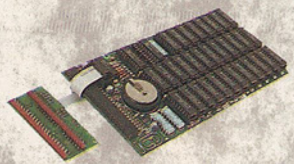
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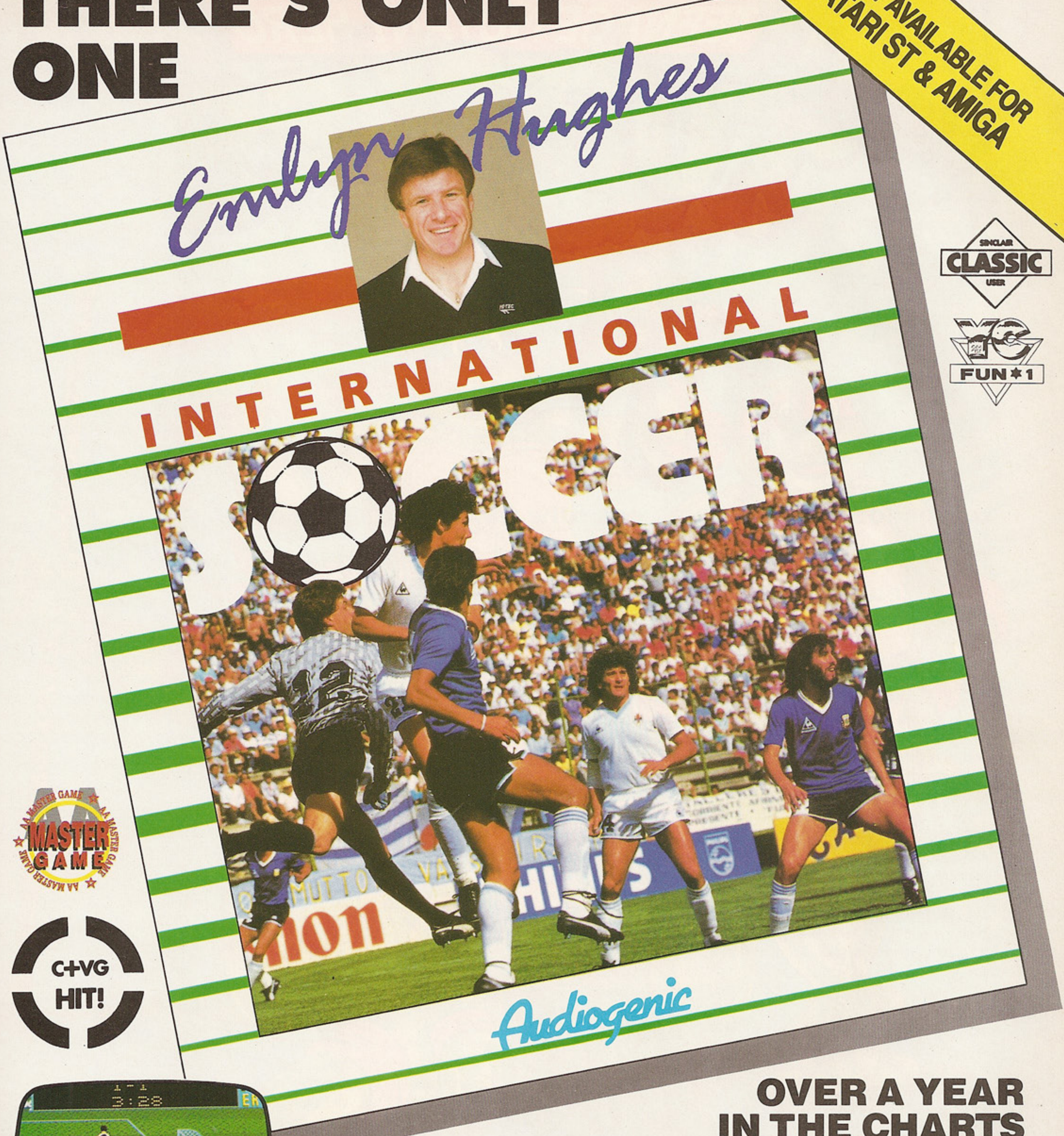
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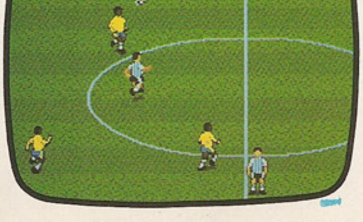
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KONAMI

N YOUR DISK

FLIPIT AND MAGNOSE

creatures from Mars set out on a st for water: but the inhabitants of et Earth must be placated or ded in this playable level of geworks' forthcoming platform avaganza.

GET SET GO!

t to set up a menu that's graphically sing and also idiot-proof? Get Set Go! set one up to your specifications and ign: we've even used it for this th's Coverdisk.

GIRL ACTIONS

-eh cor blimey missus, another dou- entendre that features harmless fun ting aliens from somewhere else k to where they came from.

PIC OF THE MONTH

section on the disk, this. Rather use up huge amounts of disk space lots of pictures by Amiga Format ders, we're including just the best - time from Dr S A Hill.

ZERO VIRUS

another Virus killer? In conjunction Mark Smiddy's article on Page 105, include Jonathan Potter's program Virus. Comprehensive and simple to it does a thorough job.

VECTACHECK

handy little utility from Tony chett. It will check your Amiga's mem- vectors, tell you if a fatter Agnus chip tted and even let you turn on 60Hz een mode!

MIDI ANALYSER

do you test something that's sup- ed to be sending MIDI data? By using program from Paul Overaa, you can itor any MIDI information being out- from a source to your computer.

COLOUR WORKBENCH

up your Workbench with colour- s. Harmless but easy on the eyes.

UP TO £800 UP FOR GRABS!

ink you've got what it takes to write r the *Amiga Format* Coverdisk? Get ur programming tools out and prove hat you can do, and earn yourself me cash in the process. We're after Workbench hacks, demos, utilities, ames, game cheats... You could earn to £800! Turn to Page 99 for details.

BACK UP YOUR COVERDISK IMMEDIATELY!!!

ON'T KNOW HOW? SEE P 99 FAST! NSURE YOU WRITE-PROTECT YOUR DISK BEFORE USE!

disk EXTRA

The disk is packed with the usual diverse collection of useful utilites and fun and games. All you need to know is how to use it. PAT MCDONALD explains.

FLIP-IT AND MAGNOSE

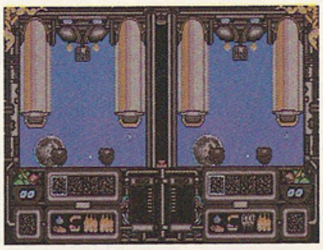
PROGRAM: IMAGEWORKS
FILES: FLIPITNMAGNOSE

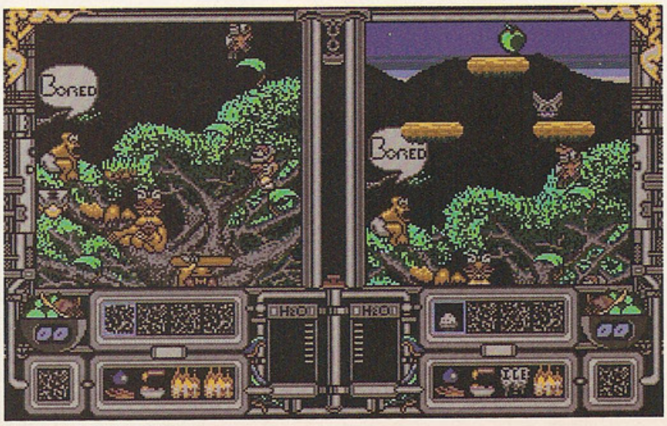
The planet Mars has a severe lack of water, as anyone who has been there will tell you. Two natives, Flip-It and Magnose, have won a prize draw to travel to the planet Earth and collect a few drops of water (a couple of million gallons should do) to save their dying civilisation. The prize for completion of this arduous task is two Gargoids which, so I'm told, ensure a life of pleasure and ease.

So, in this one or two player joystick-controlled demo you play FlipIt and Magnose in one level of the game. You can leap about the scenery, pick up and drop things, and hopefully get some water back to the teleport pad. Mind you, there's a distinct lack of water in the game area, and your Martian Overlords didn't even give you a bucket!

Dotted around are various creatures that can help or hinder you in your quest. There's no such thing as a free lunch, though, so you will have to use your brain to work out how to bribe these earthlings. Some of them are quite nasty, and will bite you or knock you off your platform if you don't give them what they want.

Here are a few clues: the big male monkey wants some nuts, but can't crack the shells, the baby monkey wants something to play with, and both the snake and the frog need feeding.



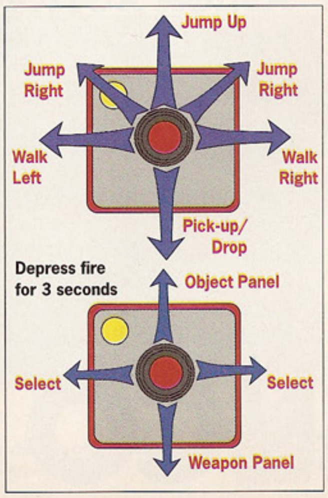


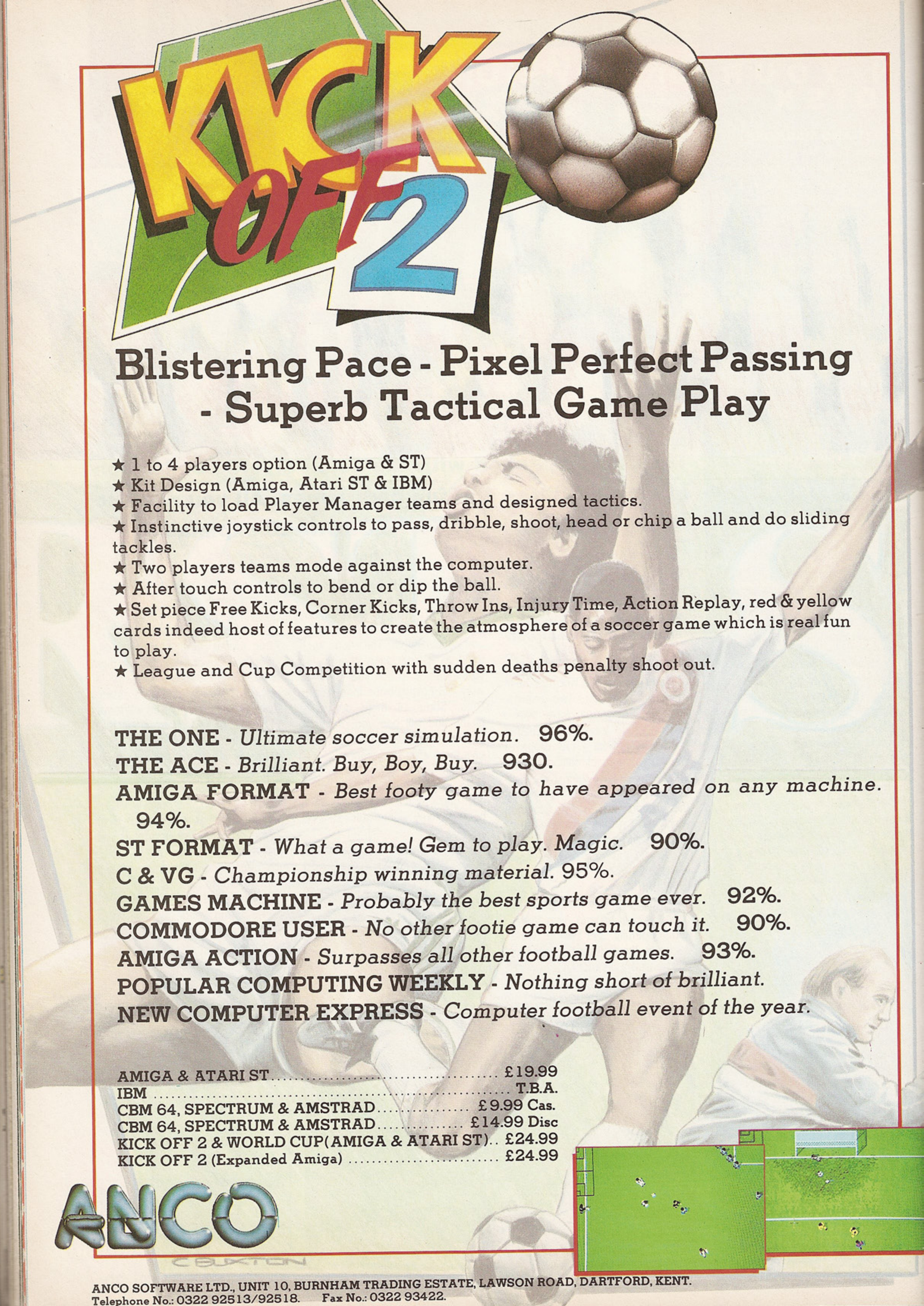
Getting Started

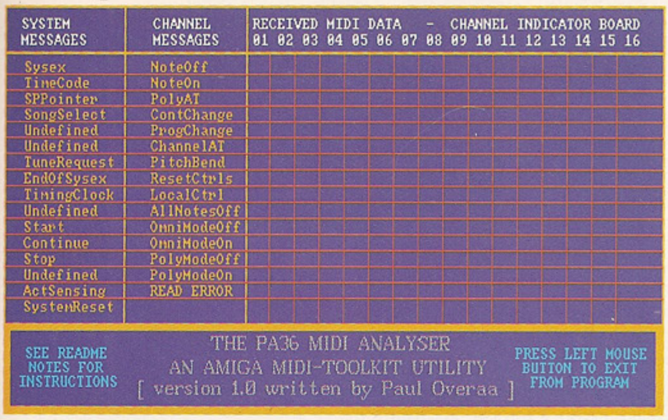
After turning your computer on, insert the Coverdisk into your disk drive. After a few moments a menu will appear, and by pressing function key F1 the game will load.

Flip-It (the Martian on the left) is controlled with a joystick plugged into Port 2, whereas Magnose responds to Port 1. If you leave your mouse plugged into here, then Magnose will leap into the arms of a monstrous bird. Which doesn't really matter if you just want a one player game.

Leaping and jumping are easy enough, but to sucessfully pick up, drop and offer things, you have to do weird and wonderful things with your joystick. Here's a diagram to help you out:




KICK OFF 2
Blistering Pace - Pixel Perfect Passing - Superb Tactical Game Play
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★ Facility to load Player Manager teams and designed tactics.
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★ Two players teams mode against the computer.
★ After touch controls to bend or dip the ball.
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Lovely program this. It displays whatever Midi data is going into your Amiga. Check out that your synth's Midi signals are OK!

ZERO VIRUS

PROGRAM: JONATHAN POTTER
FILES: ZEROVIRUS, ZEROVIRUS.BRAINfiLE, BRAINRUN, ZEROVIRUS.PALETTE

Jonathan Potter's virus killer must be one of the easiest to use. It has icons, it has pull down menus, but what it doesn't have is documentation on the disk. So pay attention!

The main feature of the program is that it can learn. A brainfile is used to remember all known viruses, and it can be updated to look for new viruses. It doesn't automatically destroy any suspect programs, but will warn you and give you the option.

First, the program checks your Amiga's memory to make sure that no virus is present. It also displays some of the memory vectors which viruses alter.

By clicking on the left mouse button, you can enter the main menu. The three top options are a bootblock checker, a file checker and finally the brainfile. To get out of these options, use the standard Intuition method: that is, move the mouse pointer to the top left of the screen and press the right-hand button to bring down a menu. Keeping the button pressed, move the pointer down and select Main Menu.

Bootblock Checker: You can check disk bootblocks, (where viruses commonly hide). If you have extra floppy disk drives attached then you can check those disks too.

File Checker: You can select a particular directory to search, and also get Zero Virus to check all the subdirectories it encounters. If you want, it will delete any virus it comes across automatically.

Brainfile: A scrollable list of all the viruses that the program knows about is displayed. You can load in a new brainfile (when it becomes available: updated brainfiles will appear on future disks) or edit the old one. Note that some of the so called 'viruses' are in fact obscure bootblock loaders, which you may want to retain. Also, some of the suspect programs 'may or may not be' viruses: they are in the brainfile just in case they turn out to be.

Leave: Before you leave Zero Virus, you can iconify the program. This means that the program will stay enabled on the front of Workbench and will check all disks put in the disk drive for suspect bootblocks.

Getting Started

Turn your Amiga on, insert the Coverdisk, and select option four from the menu. Alternatively, boot up with your Workbench disk. When the disk drive has stopped, insert the Coverdisk and double-click on its icon. Next, double click on the ZeroVirus directory and finally do a double-click on the ZeroVirus icon.

MIDI ANALYSER

PROGRAM: PAUL OVERAA
FILES: MIDIANALYSER, README

A petite program that will provide a graphical display of MIDI data flowing into your Amiga. Paul Overaa contributed this piece, from a much larger musical block-buster that he's currently writing.

A few words of caution. Make sure that your MIDI equipment is connected before you start running the program, as connection and disconnection can confuse it somewhat. Also be aware of the fact that it doesn't run at Fairlight speed, so don't pump volumes of MIDI data to it, because it won't be able to cope.

Getting Started

First, start up your Amiga and load Workbench. Then insert the Coverdisk in any drive, double-click on the Coverdisk icon, and double-click on the MidiAnalyser directory. To get out of Midi Analyser, just hit the left mouse button. That's all there is to it.

CANARY!

PROGRAM: MARK SMIDDY
FILES: INSTALL-IT ,CHECK_CANARY ,READ ME, START_CANARY, CANARY!, CANARY_FILES, MAKE-TURKEY-FILES, START_CANARY, CHECK_TURKEY!, CHECK_MINE2, CANARY_FILES2, CANARY_STARTUP2, TURKEY!

A novel system from Mark Smiddy, to complement his article on Page 105. It gives you the abilty to check whether a virus is operating on your machine, rather than checking a disk. To put it simply, Canary! is bait for viruses. They can't resist it. Once they've had

GIRL ACTIONS

PROGRAM: ANDREW HIRST
FILES: GIRL_ACTIONS

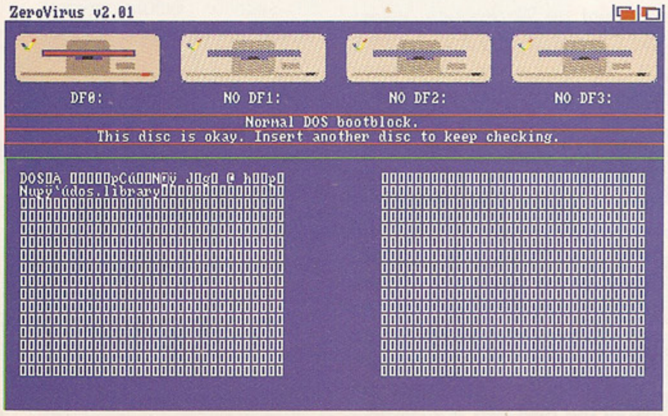
Old fashioned, antiquated and very, very addictive: that's the ingredients of this classic shoot-em-up clone. The aim of the game is to annihilate as many of the swooping aliens as you can without them ramming or shooting you. Simple, huh?

Getting Started

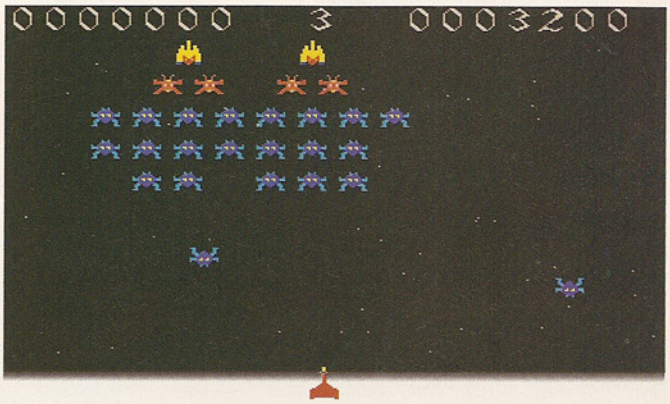
Start up your Amiga, insert the Coverdisk and after a few seconds a menu will appear. Press function key F3 and the program will load and run. Control of your ship is by a joystick plugged into Port 2. Happy Blasting!



The opening screen of some dodgy Software? Naaaaaaah.



With ZeroVirus you can check the bootblocks of disks in any floppy drive. Viruses beware!



Swooping, swirling aliens with your destruction on their tiny minds – Girl-Actions, now viewing on your coverdisk.

their wicked way with a Canary! disk, then you can check the disk and KNOW that there is a virus on your machine.

First, the limitations. You can't use this program on a hard drive and it requires the IconX program to be present in the C directory – don't worry, you can just run it off the Coverdisk. You must also use Workbench 1.3 or later.

The program can make two slightly different varieties of virus bait. Canary! disks contain just a few files of fixed length, and is mostly empty. If a virus tries to copy itself onto the disk, then the program Check Canary! will notice the changes.

The other variety are Turkey! disks. Turkeys are bootable disks that contain a Workbench and not a lot else. If a virus copies itself onto the boot sector (as many of them do) then the program Check Turkey! will alert you to the change.

Getting Started

First, start up your Amiga and load Workbench. Then insert the Coverdisk in any drive, double-click on the Coverdisk icon and then do a double-click on the Canary! directory.

There's quite a few files here, but the first one to select is the readme icon. This explains the operation in more detail, and how to make Canary! and Turkey! disks. You only really need one of each.

Next time you suspect a virus is operating inside your computer, put these disks through it and then check them with the Check Canary! or Check Turkey! programs which you will find in the same place as the 'read me' file.

On its own, Canary! isn't as good as a virus killer (like Zero Virus – see above) but used in conjunction with a virus killer it will give a more definite answer to the question "do I have a virus?".

COLOUR WORKBENCH

DIRECTORY: MIDIANALYSER
FILES: COLOURWB

Ultra-simple one, this. It just turns on a colourful copper display behind your Workbench screen.

Getting Started

Boot from your Workbench disk, insert the Coverdisk, open up the MidiAnalyser and double-click on the ColourWB icon. Double-click on it again to turn the effect off.

MAIN

PROGRAM :PAUL OVERAA
FILES: MAIN.C, MAIN, READMEPO

Budding Amiga programmers will be pleased that Paul Overaa has contributed both the Lattice C source code and the finished program to the disk (see Page 193 for his informative article). However, as the 'read me' file states, it will not run straight from the Coverdisk...

The reason for that is that Main is an exercise in programming and people interested in seeing it in action will have to do a little bit of work.

Incidentally, all the program does is set up an Intuition screen and print a message on the screen in an obscure font called Bocklin. All you can do after that is exit back to the Workbench by selecting the quit option from the pull-down menu at the top left.

Not much? Well, if one person reads the article, looks at the source code and installs the Main program on their Workbench disk, it will definitely have been worth the exercise.

Getting Started

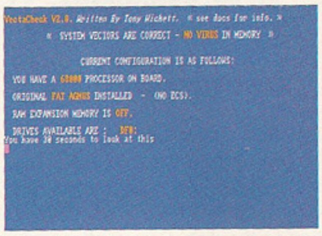
Please note that the following is not for the novice or somebody who 'wants to have a look'. It's for people who are serious about programming their Amiga, and such people should be able to follow these steps...

Take a look at the fonts directory on the disk. The contents (bocklin.font and also the bocklin directory contents) must be copied onto a bootable Workbench disk, as must the Main program.

If Main can't find that font in the fonts directory of the disk which booted it, then it won't work. So, that's why you have to copy the font onto the Workbench bootdisk – unless it's already there.

VECTACHECK

PROGRAM: TONY WITCHETT
FILES: VECTACHECK



Ever wondered if your Agnus is overweight? Here's a translation for non-techies – do you have an enhanced chip set Agnus that permits programmers to do even more amazing things with graphics on the Amiga? This programette will tell you.

Not only that, but if you have a Fatter Agnus, you can flip between 50Hz and 60Hz (normal or vertically stretched screen). It will check the CoolCapture vectors to see if a nasty virus has installed itself, and will also tell you what processor is installed, if there is any extra RAM present and also all the disk drives that are presently connected.

Getting Started

Switch on and insert the Coverdisk, then select function key F9 from the menu. The program's display of just what is going on inside your Amiga will appear for 30 seconds before control is returned to the menu.

PIC OF THE MONTH

PROGRAM: DR S A HILL
FILES: THING.HAM

Here's a challenge for all the artistically talented readers out there. Every month, ONE picture – the best we get – will be put onto the disk for all our readers to appreciate. This month, Dr S A Hill has won the coveted position with his ray-traced caterpillar. Will your picture be next?

GET SET GO!

PROGRAM: MARK EVERINGHAM
FILES: GET_SET_GO!, DOCUMENTATION, AFMENU

This is a menu creation program. Finished menus can be changed to look very different, and you can use both the function keys and the mouse to select options. It's so good we used it for the menu on the Coverdisk.

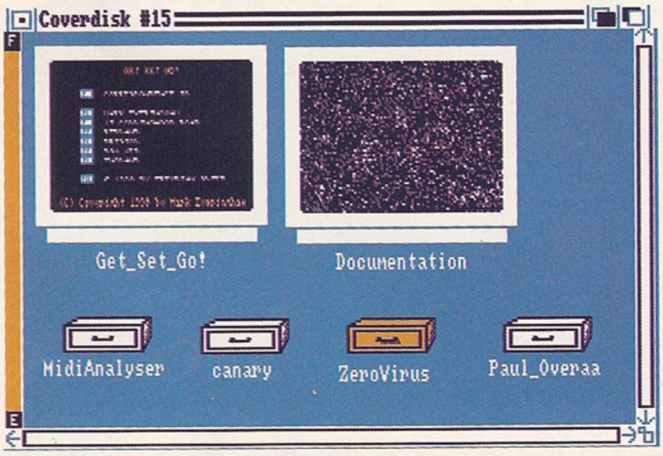
Get Set Go! can be changed to your particular requirements by writing a short options list. Ours is called AFMENU, and provides an example of just what you can do.

Editing this can be done with ED, the line editor included on every Amiga Workbench disk, but personally I'd recommend using a word processor like Protext for the job.

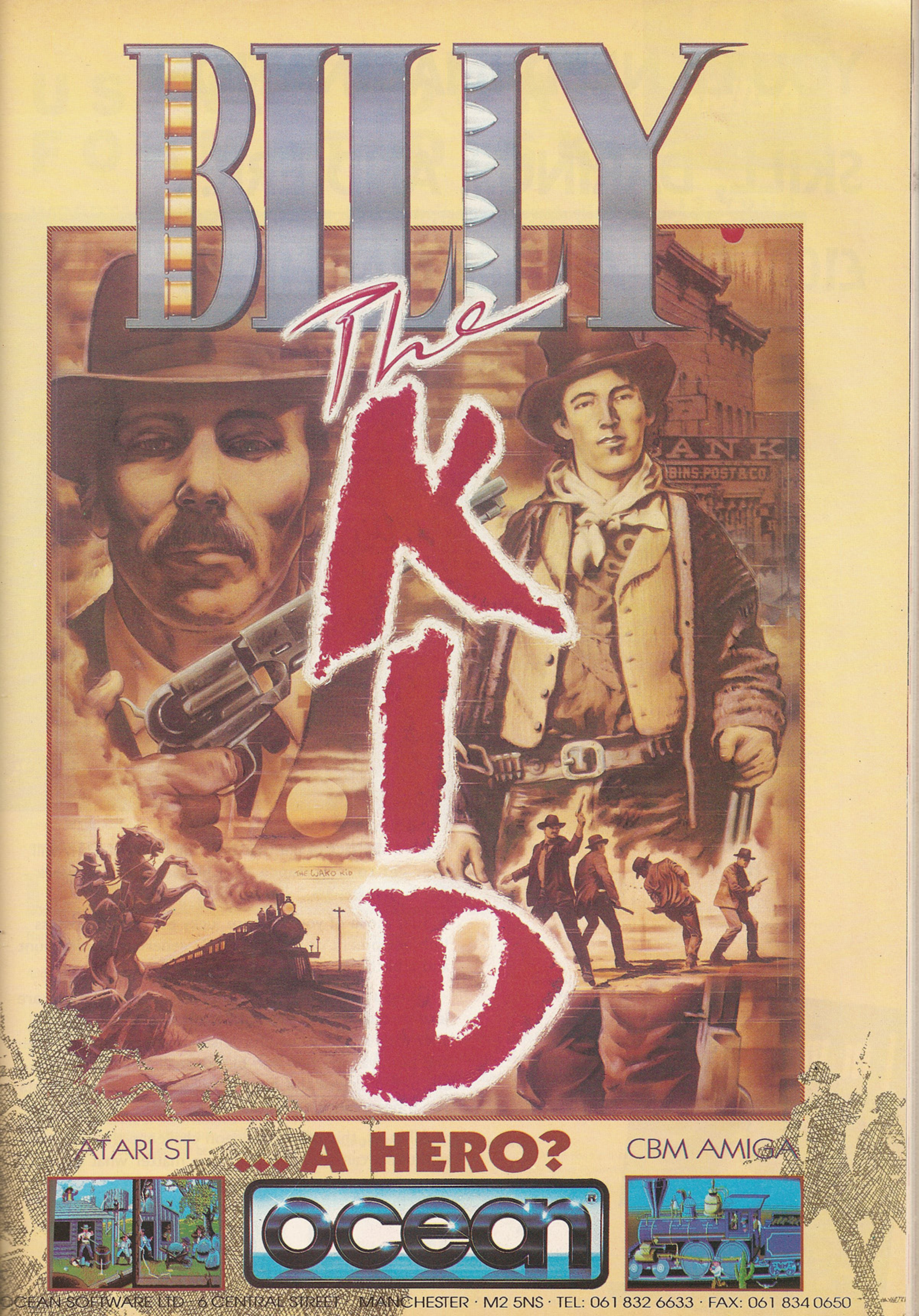
Getting Started

To see what the program can do, turn your Amiga on and insert the Coverdisk. The menu you'll get was created with Get Set Go!. If you want to use the program to make up your own menus, here's a rough idea of the way to go about it.

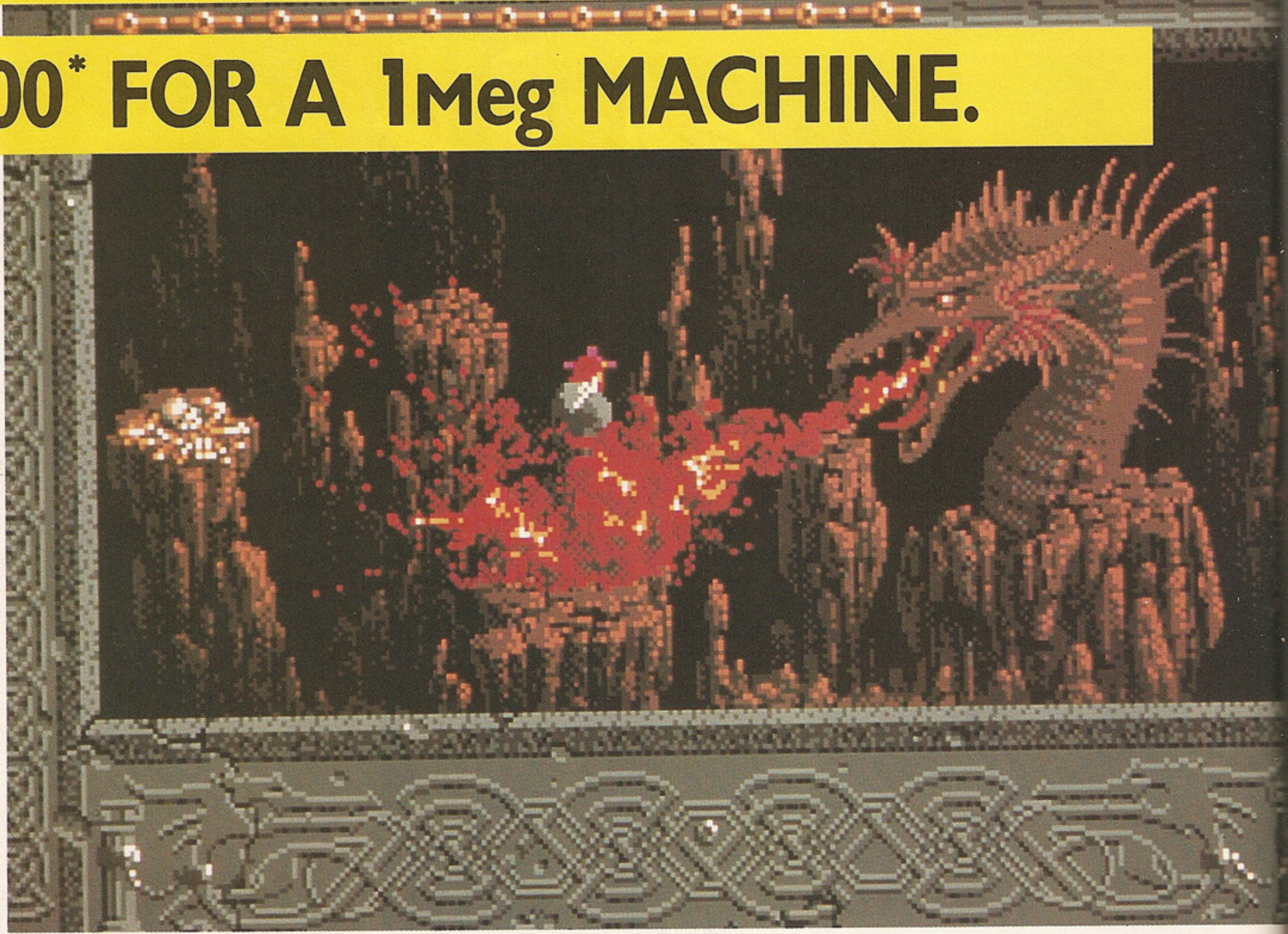
Boot up Workbench, insert the Coverdisk and double-click on the documentation icon. Have a good read and when you've finished take a look at AFMENU script file with ED or a wordprocessor. Once you have a rough idea of all the commands, copy Get Set Go! onto a workdisk with a script file. Edit the startup-sequence in the s directory so that the last thing it does is: Run "Get_Set_Go!" your scriptname. Finally, remember to Install the disk you are running a new menu on.



Fantastic set of programs on the disk. To see Get Set Go! running in demo mode, just click on the icon. No problem!


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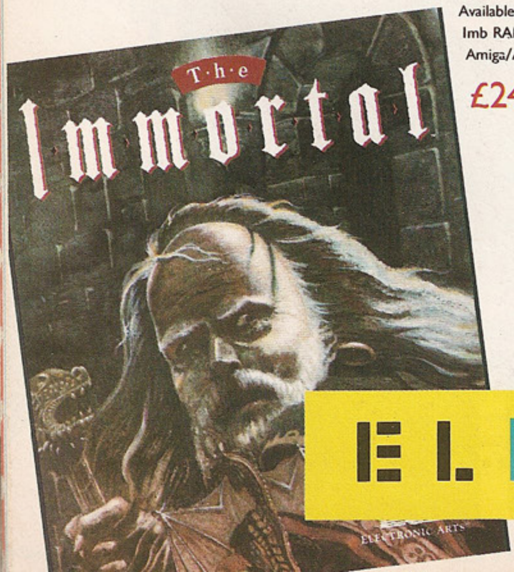
* £100 is the estimated cost to upgrade your Amiga or ST from 512k to 1mb.
If you already have a 1mb machine it won't cost you anything more but the price of the programme!

It's a sad fact of life that only the fortunate few will ever get to experience Will Harvey's masterwork - The Immortal.

Still, those of you who are lucky enough to possess 1mb equipment or a monstrously generous maiden aunt and a birthday coming up, you're in for a rare treat.

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USING YOUR FORMAT DISK

IMPORTANT! Before using the *Amiga Format* disk, you should back-up the master as soon as possible.

BACKING UP YOUR DISK

For many reasons, it is important to make a backup of the Coverdisk as soon as possible. Copying the disk may sound like a complicated task suitable for techno-buffs only, but it is surprisingly simple provided you read the following instructions carefully:

1. First, turn on your machine and load Workbench. Once the Workbench screen appears and the disk-drive light goes out, remove your Workbench disk and insert our Coverdisk.

2. Next, click once on the Coverdisk icon and then press the right mouse-button and the Workbench menus will appear. Now, while keeping the right mouse-button depressed, move the mouse pointer over to the 'Workbench' heading and a menu will drop down. Move the mouse pointer over the 'duplicate' menu option and then press the left mouse-button.

3. After a few seconds' disk access, the Workbench DiskCopy tool will be loaded and run. Now just follow the on-screen prompts and your *Amiga Format* Coverdisk will be copied to a backup disk. When the machine asks for the destination, insert your blank disk into the drive. Further instructions are in the user's guide that comes with your Amiga.

USING THE PROGRAMS

All programs on the *Amiga Format* disk are specially set up to make them as easy to use as possible. If you can use the Amiga's Workbench then you can use our Coverdisk! If you do have problems with a program, full instructions on loading and using the programs are included in Disk Extra and these should get you up and running. If you still have problems, you should read the documentation file (.DOC) that is included with every program. To run any of the programs on this month's Coverdisk, follow a simple procedure: unless specified differently within Disk Extra, just double-click on the program's icon on the Workbench and it will load and run. Full details on how to use the programs once they have loaded are included as a documentation (text) file with the program.

To display a documentation file, just double-click on the appropriate .DOC file and a window will open containing the file's contents. Pressing the space bar will advance the text a page at a time.

COPYRIGHT NOTICE

DISK PROBLEMS?

Flummoxed by files? Dumbfounded by disks? Paranoid about programs? If you have a problem with the disk – and you're sure the disk is in full working order. Then what you need is the disk help page. From now on there will be a page devoted to any problems you may encounter with the disk. Sadly, we cannot deal with enquiries by telephone as it is just too time consuming. If you have a problem then send it to us in writing stating the model of your machine and anything you've got attached to (or plugged inside) the computer. It will then be dealt with on the help page in the magazine.

NB the previous disk hotline number is no longer in operation and any problems should be sent in writing to our Bath offices at the usual address. However, if you have a faulty disk then please follow the instructions on this page for its return because we do not have replacements at our Bath office, they have to be obtained from the disk duplicators

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My program name is..

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Approximate total size of files in kilobytes ....K **(we cannot use programs longer than 200K; shorter submissions, under 100K, stand the best chance of publication). It is a:**

- ☐ **Game**
- ☐ **Technical tool**
- ☐ **Business utility**
- ☐ **Art program**
- ☐ **Music program**
- ☐ **Educational**
- ☐ **Novelty**
- ☐ **Other**

Brief description ....

....

....

....

Checklist **(please tick):**

- ☐ **Stamped, addressed envelope for return**
- ☐ **README.DOC explanation file on disk**
- ☐ **Printout of README.DOC file (if possible)**
- ☐ **Name, address, machine type written on label**
- ☐ **Disk certified virus free**

IMPORTANT **Please sign this declaration:**
This program is submitted for publication by *Amiga Format.* It is wholly my own work and I agree to indemnify Future Publishing against any possible legal action should copyright problems arise.

Signed ....

Date ....



IS YOUR DISK FAULTY?

We have done our best to check that the programs on the *Amiga Format* Coverdisk are simple to use, error-free and have no known viruses. However, we cannot answer telephone queries on using the software, and we do not accept liability for any consequences of using the programs on the disk.

If your *Amiga Format* disk is faulty – and out of the tens of thousands duplicated, some are unfortunately bound to be – you should send it back for a free replacement within a month of the cover date to:

Amiga Format
October Disk
Discopy Labs
Unit A, West March
London Road
Daventry
Northants NN11 4SA

If your Amiga refuses to accept the disk, try using the DISK-DOCTOR utility on your Workbench disk to rescue it before sending it off for a replacement. Full details of *DiskDoctor* can be found in the user's manual that came with your machine.

WE WANT YOUR PROGRAM

If you've got any programs for the Amiga which you think other readers would find useful, interesting or amusing, we'd very much like to know about them.
1. Make sure your program is foolproof to use. 2. Create a file called README.DOC on the disk which explains exactly how to use your program. 3. Fill in this form, sign it, and send it without delay to: Coverdisk Software, *Amiga Format*, 30 Monmouth Street, BATH BA1 2AP. You could win a share of up to £800 prize money for the best programs each month.



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- **RESTART THE PROGRAM**
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- Calculator
- Help command
- Full search feature
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- Notepad
- Disk handling - show actual track, Disk Sync pattern Etc.
- Dynamic Breakpoint handling
- Show memory as HEX, ASCII, Assembler,Decimal
- Copper Assemble/Disassemble.

REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE WITH ALL MEMORY AND REGISTERS INTACT.-INVALUABLE FOR THE DE-BUGGER OR JUST THE INQUISATIVE!

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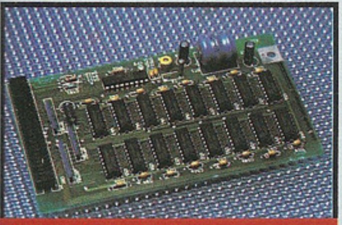
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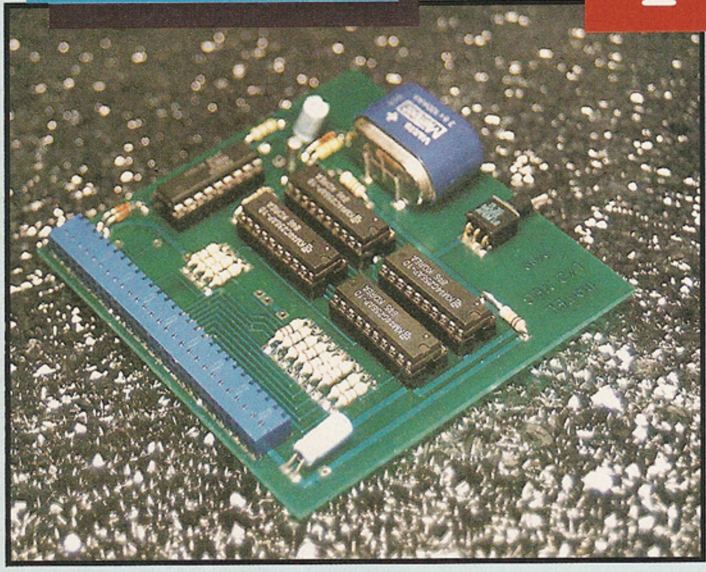
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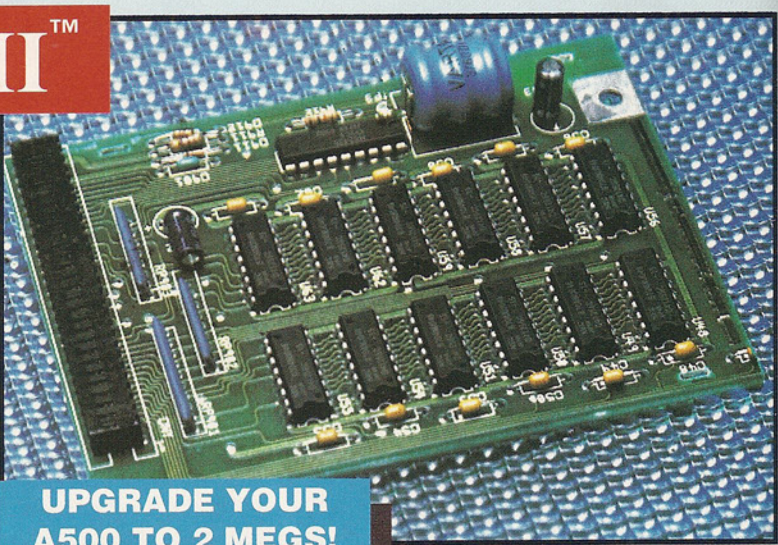
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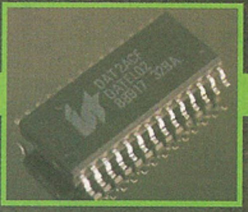
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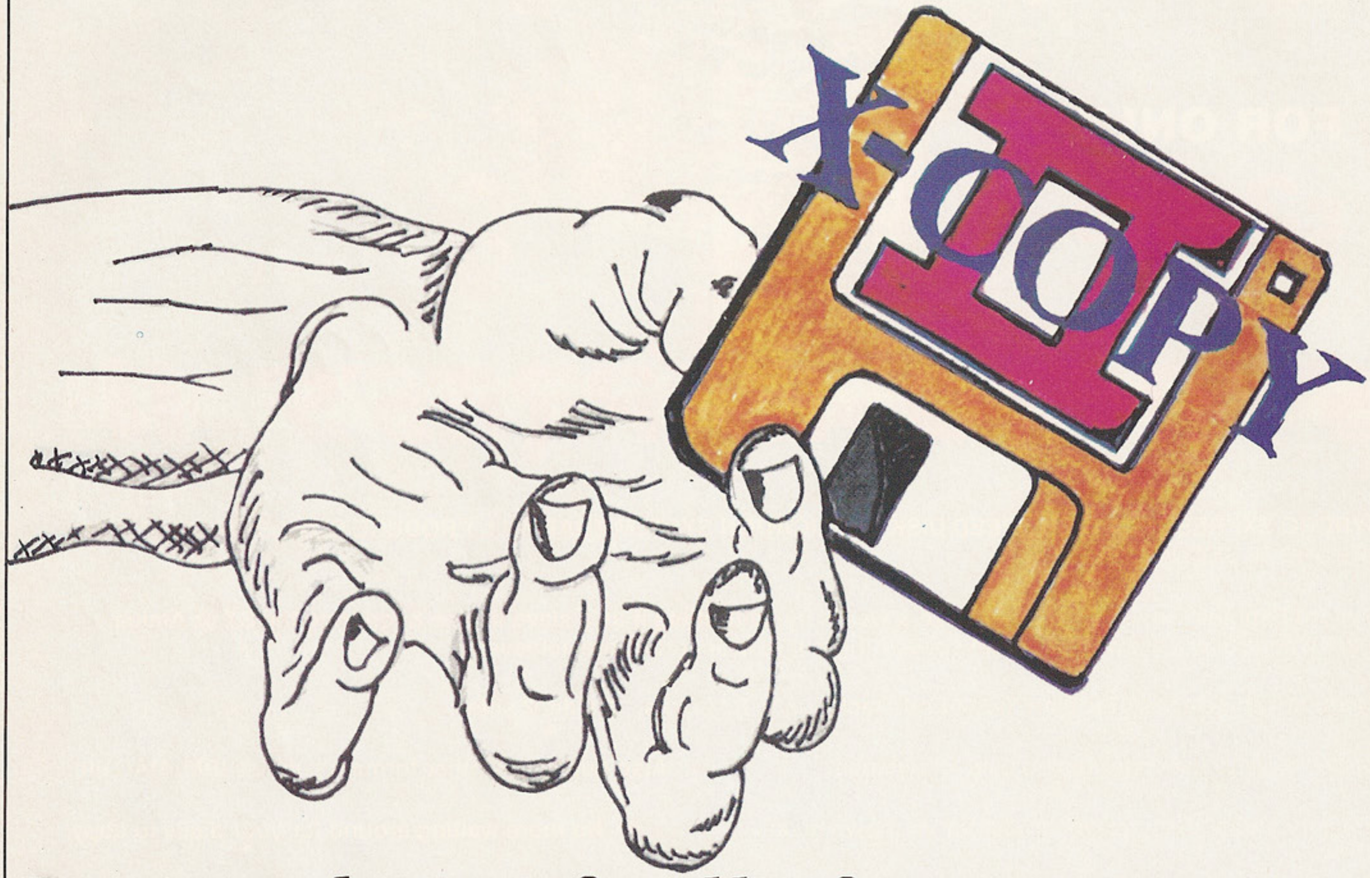
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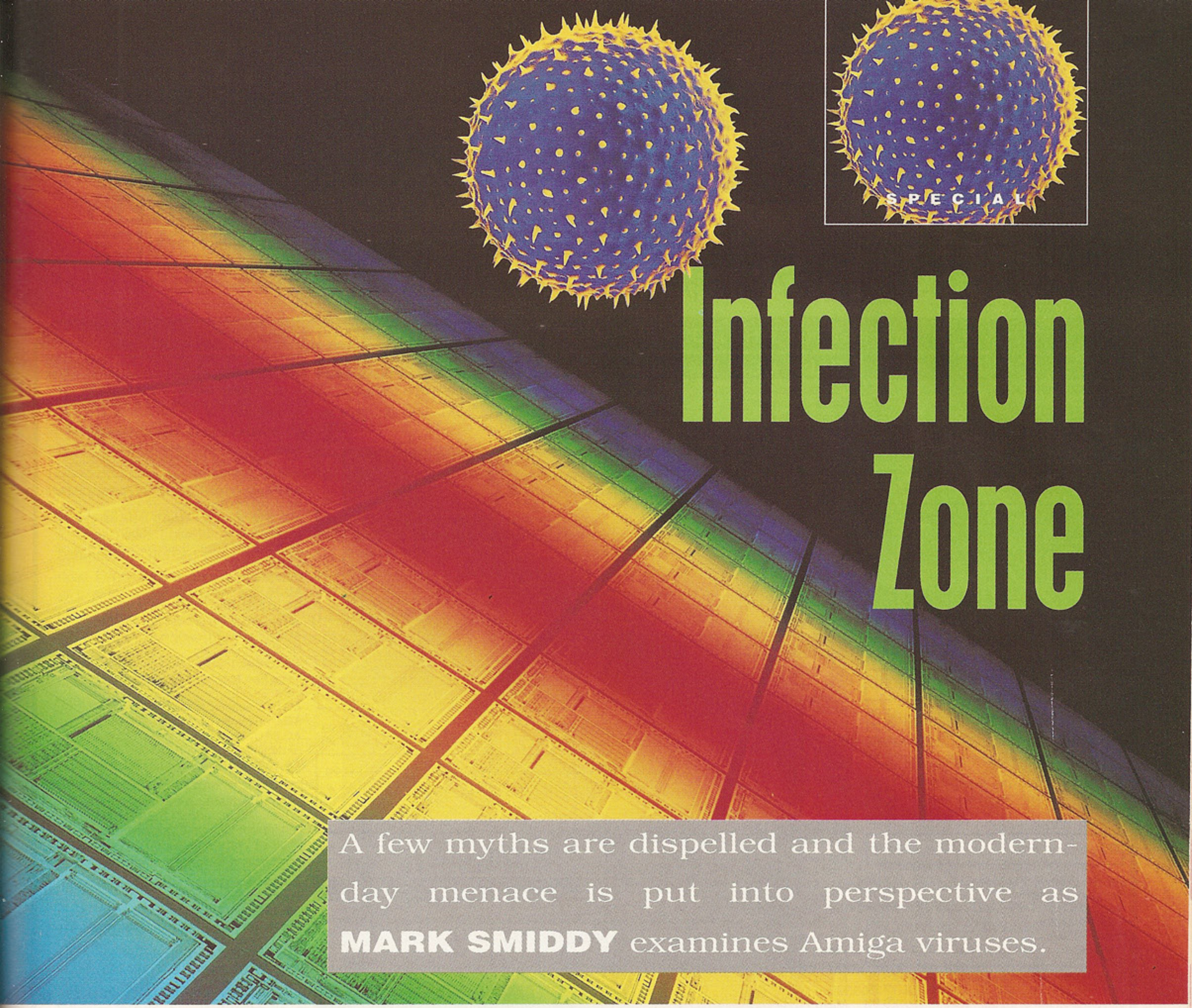
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Infection Zone

A few myths are dispelled and the modern-day menace is put into perspective as MARK SMIDDY examines Amiga viruses.

Let me tell you a story. Once upon a time, on a computer far away, there lived a bear. A great big bear with black eyes, yellowing, hungry teeth and breath so foul it could knock out a charging Rhino at fifty paces. The bear lived in the great RAM cavern, between port Eye-Oh and the city of See-Pea-You. Every so often it would enter the great forest of Disks in search of easy prey.

The Files (who lived in Disk forest) existed in such fear of the bear they posted a guard on Mount VeeDeeYoo. When the guard set eyes on the bear, he would cry out to the great god, Operator: "Please, feed the bear!"

But sometimes the great Operator was angered with the files and he ignored their pleas. Thus the bear would see its hunger fulfilled and the guard would vociferate "The bear was hungry, and now it's eaten one of your files!"

Get Serious!

This is in truth something of an apocryphal tale, but describes in prosaic form one particular virus rumoured to have "infected" an early computer system. In this language, it sounds childish enough to be a harmless prank. Childish certainly, but dangerous enough nonetheless to wipe a computer system clean before the culprit is eliminated.

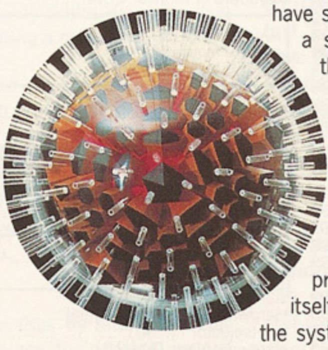
In this example The Bear could be satiated by entering a keyword at the "Feed the Bear" prompt. If the keyword (or phrase) was known, the menace went away – for a while.

All this may seem light years away from the Amiga but, as many have discovered to their dismay, viruses crop up everywhere: often on pirate disks (serves them right?) and in the Public Domain. Until recently, the only software guaranteed clear of the problem was commercial offerings, but now even this last line of defence has come under attack.

What is a Virus?

The word virus derives from the 16th Century Latin for slime or poisonous liquid. In modern terms, it belongs to any members of a vast group of sub-microscopic DNA nuclei dressed in a protein coat. These simple organisms are one of the most basic forms of life, only capable of living and reproducing within the cells of animals and plants. Many are pathogenic, creating symptoms ranging from mild discomfort to death.

Computer viruses ape their protein-coated namesakes very closely. So closely, in fact, that some pundits have speculated that they constitute a simple form of life. However, that is a philosophical avenue best explored during a late-night discussion over several glasses of some intoxicating liquor or another.



Going back to the real world: in a nutshell, a computer virus is a (usually small) program capable of duplicating itself. The effects of the virus on the system depend on the actions of the program: precluding bugs in the code, effects designed by a person or persons unknown. This article describes the effects of known viruses but avoids the technical information needed to create them. This might have been of interest, but it is not the author's intention to aid would-be virus writers.

Count on Dracula

There are several distinct "strains" of computer virus – variants of the way the infection (replication) code is written – and each has a name. As can be seen from this, viruses are ostensibly simple to write, which is why there are so many around.

Limpet: Often called the boot-block or boot sector virus. The term Limpet derives from the way the virus 'adheres' to the bootblock of infected disks. These are the simplest viruses of them all and are usually the easiest to catch. They were also the first viruses to appear on the Amiga.

The very first Limpet came courtesy of Swiss Crackers Association or SCA: no prizes for guessing, a bunch of pirates. Bootblock viruses consist of a small section of code which loads a disk's boot sectors when the computer is booted from an infected disk. Every time a new (write-enabled) disk is inserted the virus writes itself back to the new disk thus infecting it. The exact way depends on the type of Limpet: some write themselves back during soft resets, others to every uninfected disk inserted.

Doppelganger: This type works by replacing the code of an original program completely with its own. Next it moves the code of the original program somewhere else on the same disk and gives it a blank name. When the original program is called, the virus runs (doing its dirty work) then exits by launching the real program. Sounds complex? Not at all. Three simple AmigaDOS calls can be used to do this.

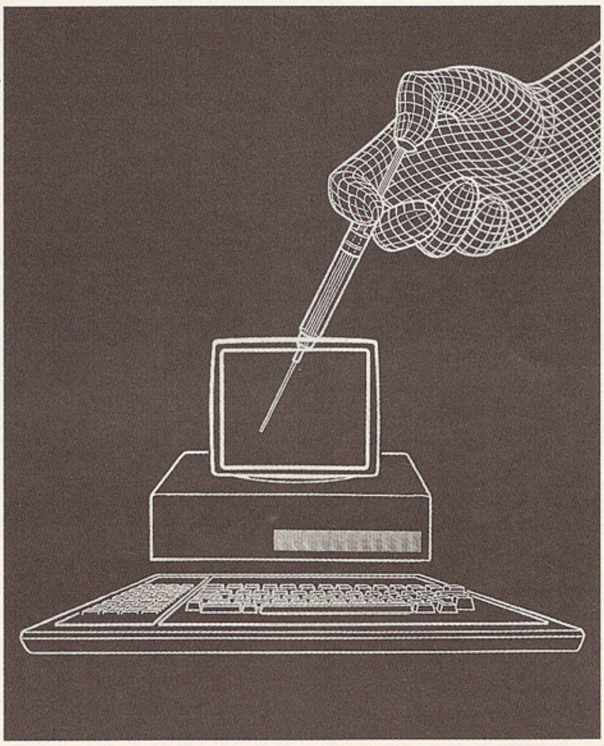
BSG9 was an early example of this type and can be identified by the tell-tale 'blank' file it leaves in the DEVS directory of the infected disk. The AmigaDOS's LIST command shows it up – DIR does not. If found, BSG9 is usually the first command in S:Startup-Sequence and has a byte-size of 2608 when listed.

Trojan Horse: Sometimes just called a Trojan, this type has yet to crop up on the Amiga in any large numbers for reasons which will shortly be revealed. Trojans get their name from the Greek fable of the Trojan (or wooden) horse.

As the story goes, the Greeks bluffed the Trojans by leaving a wooden horse outside the gates of Troy. The Trojans dragged the horse inside, and at nightfall the Greeks hidden inside the beast crept in under cover of darkness and murdered the Trojans in their beds.

In the same way a Trojan virus is a computer program, usually placed in the Public Domain (though not by Greeks!), with a very sharp sting in its belly. The reason why real Trojans are rare is because they take some skill to implement. The only way they will spread is if the program hiding the stinger is useful enough for lots of people to use. And once the Trojan is uncovered, everyone stops using it. For this reason Trojans use a time-bomb technique whereby they only activate after they have been used a set number of times or, sometimes, on a certain date. Most Amiga Trojans are genuine programs infected by a Parasite – see below.

Parasite or Linkvirus: Also called Worm, Zombie, Lycanthrope, and Vampire (names better used to describe the idiots that devise them) these bloodsuckers are the scourge of utility software and generally a real pain in the Startup-sequence. Like



'real' vampires they duplicate by attaching themselves to real programs and sucking out their lifeblood.

The problem with parasites is that they turn genuine software into 'Trojans' by locking onto the code and transferring themselves across onto all and sundry. Like Trojans, parasites are tricky to implement so there are less around. Unlike the Limpets, they multiply between disks *and* across directories at an alarming rate. Also they're very tricky to catch without software specifically designed for the purpose – Peter Cushing never had it this tough in the Hammer movies!

Signs of infection

There are two mainstream effects of virus infection: destructive effects and nuisance. Neither is very pleasant and some viruses exhibit both.

Nuisance Effects

Silly messages: "Software piracy is theft...", "AmigaDOS presents: The IRQ Virus", "Something wonderful has happened" and so on. The only wonderful thing that could happen to the persons responsible for these gems would be the spontaneous combustion of their Amigas.

Reversed keys: The two Amiga keys, for example, or mouse buttons, suddenly become transposed.

Lock outs: The whole machine stops accepting keyboard or mouse input, but everything else appears to be working normally.

Obscene mouse pointers: I kid you not – is nothing sacred?

Nasty effects

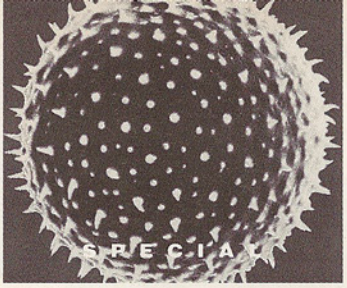
Random trashing of files: Has the effect of causing programs to suddenly crash without warning, corrupts data in pictures, music and text. Lamer Exterminator is known to have this effect.

Random trashing of disk block checksums: Difficult one to pin down to a virus because it can also happen through wear and tear, badly-stored disks and a whole host of other things. Likely to be a sign of a virus if it starts happening suddenly.

Random crashes: As above, this can happen through poorly-written software so might happen quite innocently. It is quite possible to guru AmigaDOS at the drop of a hat.

Protecting Against Them

It only takes one slip to catch a virus because once the little beggars get onto a disk, they spread VERY quickly. This checklist covers the most important points.



VIRUS MYTHOLOGY

Myth: "Viruses can spread to write-protected floppy disks."
Fact: Only hard disks are at risk since they cannot be physically write protected. No virus can pass the write-protect on floppies.

Myth: "Viruses can hurt humans."
Fact: They can't hurt people: they can only inflict psychological damage by destroying your files and creating a nuisance.

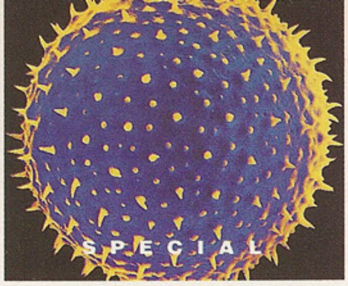
Myth: "Some viruses live in battery-backed clock memory."
Fact: There is not enough RAM, and even if there were the RAM is never executed. Some viruses key on the date or time, however.

Myth: "Viruses can damage the machine."
Fact: Virtually impossible. Damage is caused by inexperienced humans fiddling with the hardware, thinking that it's at fault when a virus is the real culprit.

Myth: "All viruses come from BBSs."
Fact: Only Trojans and Parasites can do this, by hiding in other programs – this is, however, unlikely since the HUMAN culprit would be too easy to catch.

Myth: "I only ever boot from hard disk – I must be safe!"
Fact: Trojans, and Parasites, and Doppelgangers only need to be executed (from the CLI or the Workbench) to start spreading to a hard disk, so hard disk users should be especially careful.

Myth: "I will never catch a virus."
Fact: You might. Take that attitude and you probably will.



No known virus can get past the write protection notch on a floppy. NEVER insert a write enabled disk unless something has to write to it. Better still, keep DATA disks separate from PROGRAM disks. If a virus gets into memory it can then only spread to disks which are either (a) never booted anyway or (b) don't contain any executable files.

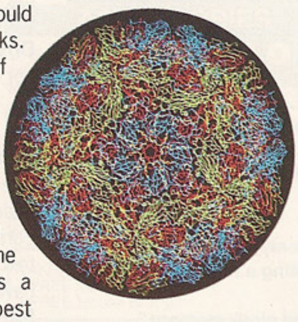
Keep a "Canary disk". This is a freshly-formatted disk with a couple of commands and a Startup-Sequence. If a Limpet tries to attach itself this disk will suddenly become bootable. A suite of programs to make Canary disks (and a lot more) is included on this month's Coverdisk. See the Disk Extra pages for more details.

Get a disk of Virus killers from your friendly PD library and check every file and bootblock of every disk you get BEFORE attempting to boot them or run any of the programs contained therein. Nearly all of the PD libraries advertising in this issue should be able to furnish you with something suitable.

NEVER, EVER, use pirated software. This includes games, utilities and applications – it's a sure-fire way to catch a virus.

When is a virus not a virus?

Long time virus-hunter Steve Tibbet, released several versions of his *VirusX* utility with protection against other virus killers, because some of these well-meaning programs would write over legitimate bootblocks. However the same was true of Steve's own *VirusX* utility – it too identified several genuine bootblocks as the SCA Limpet.

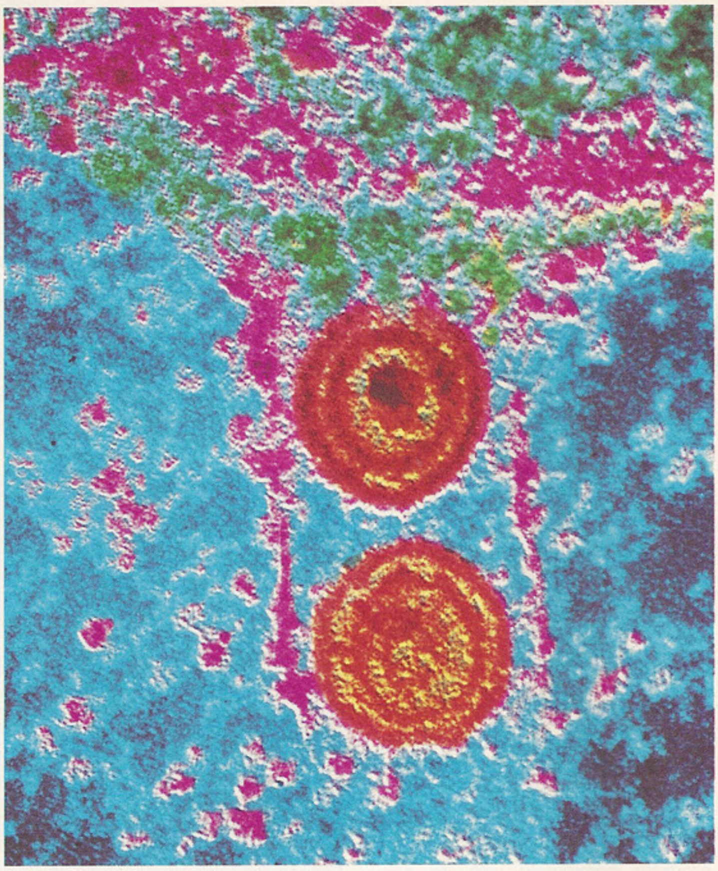


This is one of the hazards of virus hunter programs. Users unsure of the problem could often destroy a legitimate bootblock. The trick lies in determining what is a Limpet virus and what isn't. The best way is to copy the suspected disk, trash the suspect bootblock and reboot the new copy. If the disk still works, then a virus was responsible, if it does not then one of two things has happened:

- The virus killer has destroyed a genuine bootblock. So the original disk was OK. Remember, if a Limpet attaches to a disk with a legitimate bootblock loader, the disk will stop working anyway.
- The software protection has worked correctly, defeating the copier.

Under UK law, it is not legal to duplicate a disk WITHOUT the copyright owner's permission, for any reason. This is more like severely bending the law. It is, however, wise to check first and get an answer in writing before proceeding. State the intention is to use the copy as a "Canary" for a suspected virus. Chances are, the software company concerned will check the disk for you or, more likely, confirm that the bootblock loader is correct. Note that neither the author nor Future Publishing condones the use of copying equipment without the written permission of the copyright holder.

The author would like to express thanks to the following people: Steve Tibbet for the *VirusX* series. Jim Gower for assistance. Also all those unnamed souls who code feverishly into the night protecting innocent punters from the ravage of the childish virus vandals.



Conclusion

Computer viruses are here, they have been for a long time and are showing no signs of going away. Even though the law is moving ponderously toward outlawing the perpetrators of these crimes, the problem of tracing the culprit still remains. The virus is seen by many as the perfect crime.

In the end, though, the only protection anyone has against viruses is common sense. They are becoming like the common cold: clichéd and easy to catch. But the remedies are out there for the taking and all it actually takes is vigilance.

Further reading:
The Computer Virus Handbook, Price Waterhouse

WHO WRITES VIRUSES?

Any computer virus is a computer program; and programs do not write themselves. Even though there are "virus creation kits" there is no getting away from the fact that behind a program there must be some pathetic individual with nothing better to do somewhere along the line. They would probably regard themselves as programmers but programmers produce something productive, not destructive.

Despite what some may think, viruses are VERY easy to write – just about any fool with an assembler or even a BASIC compiler could do it. So who are the culprits?

The common name for these people is "pirates", or sometimes "hackers". The latter is a perversion of the erstwhile term for sensible computer experts, stolen by the pirates in sick tradition. Pirates, remember, are the people responsible for producing disks of copied software, for removing the protection and distributing copies all over the world. Put another way, threatening the very livelihood of thousands of people.

At the risk of sounding too much like a FAST advert, think about this: pirates only serve their own needs. Sick little viruses endanger computing at every level. If the software houses can't make a living, they will stop producing games, leaving the pirates on a sticky wicket with nothing left to copy. The computer companies will go out of business because no one will buy a product with little or no support: remember the MTX512, MSX, Oric, Enterprise? Eventually, even the magazines will have nothing to write about... and the whole house of cards will come tumbling down.

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The last sixteen competitor's will play using KICK OFF 2 on Amiga or ST at the International Level.

All matches will be played on a knock out basis.

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There will be a number of venues for preliminary rounds. Exact locations will be selected on reciept of application.

Last 16 matches, Quarter Finals, Semi Finals and Finals will be played on Sunday 9th December at the Computer Shopper Show at Wembley. Prizes will be presented at the show.

HOW TO ENTER THE COMPETITION

For immediate membership of the C.F.A., entry fee & full set of rules. Please send, enclosing an S.A.E., A cheque or postal order for £5.00 to address below.

Please make cheque payable to the C.F.A. In return you will recieve the C.F.A. "Competitor's Pack" and entry to the competition.

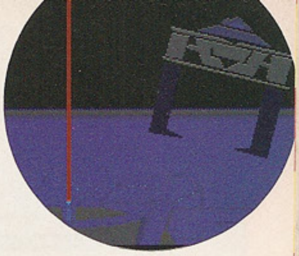
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pd UPDATE



More new releases and old gems from the world of free software, this time in the company of **PAT MCDONALD.**

DC GAMES 22 Capricorn Disk 336

This one has quite a good selection of PD games, and should prove very popular with Tetris fans. Some of the games have appeared before on other disks, so to avoid somebody buying what they've already got here's a full list of the contents.

CHINA CHALLENGE

This is a full version of the ancient Chinese game of Mah Jong. It's quite pretty and can play quite a mean game as well. It's originally a Fish disk offering which we've mentioned before, so I'll say no more.

MECHAMOID

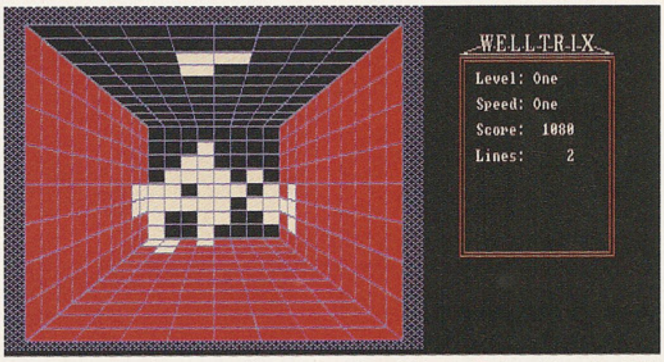
Asteroids! Will I never be free of the tumbling boulders suspended within the vacuum of space? If you've never played the game before, the idea is simplicity itself.

You control a spaceship which is trapped within an asteroid field. The ship is equipped with a laser to blast them away, but only the smallest asteroids can be dealt with with one shot. The ship can be rotated and its engine works fine: in dire emergencies reach for the hyperspace button to escape the manic boulders.

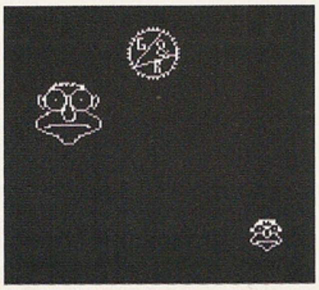
This version doesn't use rocks, but has strange interlaced faces instead. The sampled sound effects are of the schoolboy humour variety. Mechamoid is a great way to break the monotony of a working day.

BREAKER

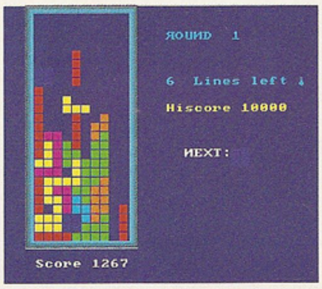
Breakout (yawn) is such an easy game to do on computer that these days companies have to release versions of it which have features from horizon to horizon.



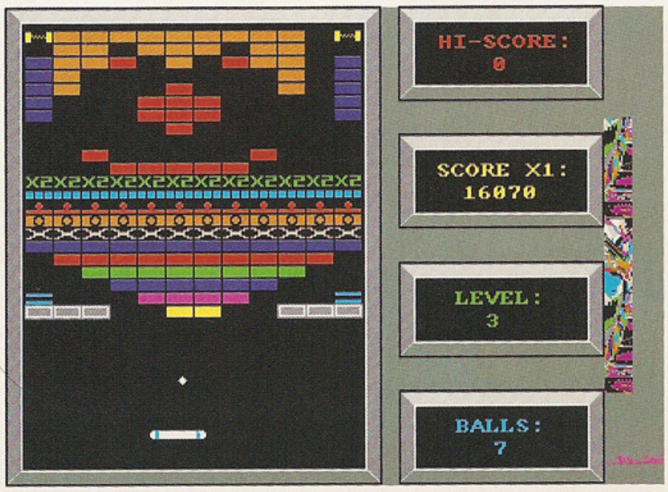
Spin those blocks, move them around and try to find a place to slot them in. That's the rivetting action in Welltrix.



Mechamoid gives you the chance to blast those faces.



Quattro is yet another Tetris variant, but a good one.



There's nothing like an old classic like Breakout to get you going and Breaker is derived from that ageing arcade game.

Anyway, Breaker's no exception to the rule, with editing features to create your own screens: I found the included screens quite tough enough but at least that makes it a challenge. For Public Domain standards it is a reasonable offering, but Breaker will never set the world on fire.

QUATTRO

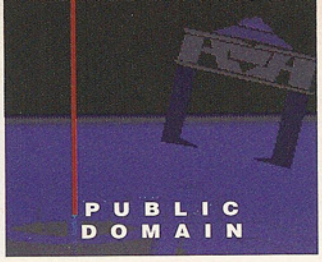
Tetris lives again. The scenario of obliterating lines of bricks by slowly building a wall should be familiar to you, but if not, here is everything you need to know to get to grips with it.

Strange-shaped bricks slowly tumble down the screen. You can manoeuvre them to a certain extent, but you must take care that you are not left with an unfillable gap. Every time you complete a row of bricks then it vanishes into thin air: but if the pile reaches the top of the screen, game over.

WELLTRIX

My fave game on the disk. It's very similar to Tetris, but uses a three dimensional playing area. You must guide the bricks down the edges of a well, and if it fills up then that's the end of the game. By sliding the bricks around the edges of the well you can fill gaps in the other side. Not forgetting that the shapes slide across the bottom of the well as far as they can go.

If you should have bricks creeping up the sides of the well, then that side is blocked off for several turns, making it difficult to get blocks where you want them. Tetris fans, this game is brilliant. Don't leave home without it.



MOBED
EMPDL 472

Designing 32-colour sprites is not easily done on graph paper (personally, my felt tip collection isn't big enough). If you want to design a movable object – be it sprite or BOB – then this program is for you. Hence the name: Movable OBject EDitor.

It was written by a guy called Martin Jones, and his efforts are not just apparent in the program: the documentation for this design utility is comprehensive and quite easy to pick up.

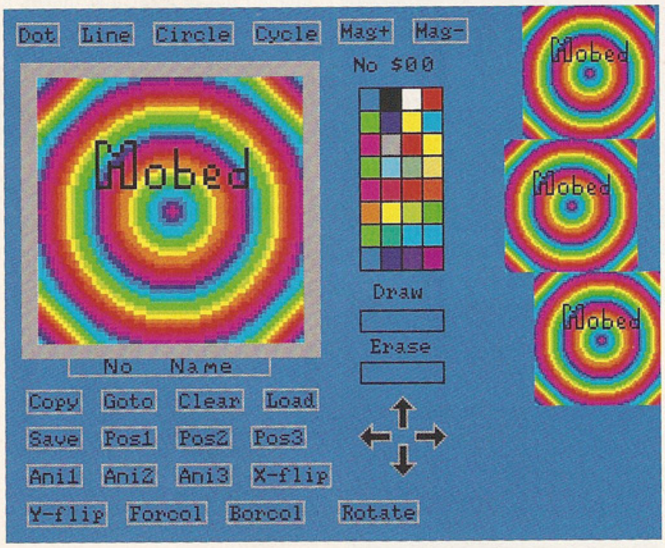
The size of object that you can edit is preset and cannot be altered: nonetheless the area should be quite big enough for most designs. Tools available include colour cycling and animation testing.

You can save out finished movable objects as raw binary data, which makes it very handy for games writers. Not only can it be used to create sprites and blitter objects, but also the font used by Mobed was knocked up by the author using the program.

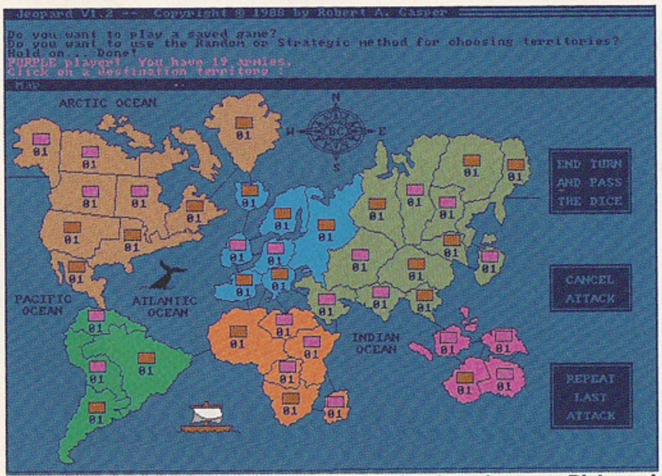
JEOPARD (1 Meg) Senlac Disk 410

Fans of the great boardgame Risk will recognise this instantly. In fact, it could well be too good a clone for Parker Games' liking.

For those who've never heard of it, Risk is a game of world domination set in the Napoleonic era. You command vast armies across continents and the simple aim is to wipe out every other player. By taking control of whole continents, your armies receive a recruiting boost. So once you start winning, you tend to keep winning. It is also a classic game for making and breaking alliances with other players. One move you'll be team-



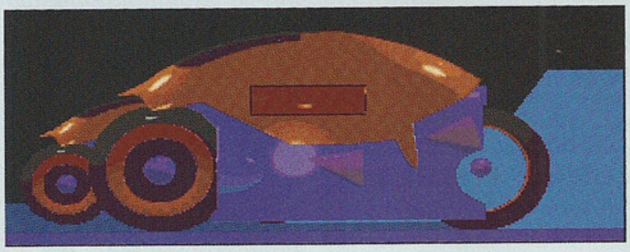
Mobed is a very useful utility that allows you to design 32 colour sprites – no trouble. You can even colour cycle and animate them.

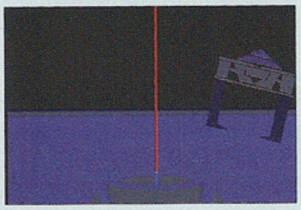


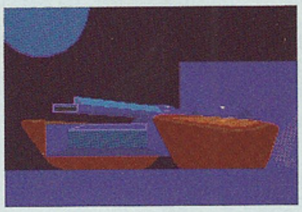
Jeopard is similar to the hugely popular board game Risk and allows players to indulge their fantasies of world domination.

Demos CORNER

Scrolly text? Copper bars? We've scene 'em and we've slung 'em out to keep the really good stuff in. Check it out...







LIGHT CYCLE DEMO PD-Soft Disks 586 and 587

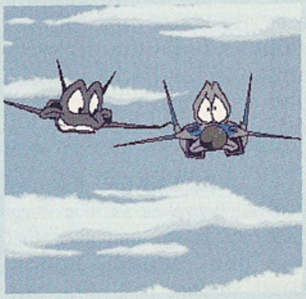
This two-disk piece of animation isn't the most technically stunning thing you've ever seen, but the programmers have managed to use images created with DPaint3, Sculpt 3D and Fantavision along with samples from the film to capture the atmosphere of that computer classic Tron perfectly. Appropriate it into your collection now. End of line.

REBELS MEGABLAST 17 Bit Software Disk 636

Another collection of music from the wizards who brought you the Coma Demo. This collection includes Coma along with a number of other slabs of heavy electronic dance mayhem. Kraftwerk samples, Acid riffs and Speak and Spell voices are thrown into the pot to provide some wicked floor-rippers.

STEALTHY II Senlac PD

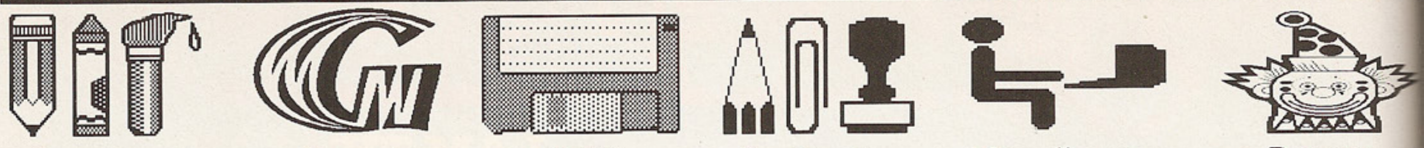
Another witty little animation from Senlac, providing a humourous view of the super-duper, 'invisible' F-19 Stealth Fighter. Stealthy creeps up on the enemy and plays a little cat and mouse before sending the confused jet swirling away to his doom. Aww!





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Graphics | **Games** | **Utility** | **Application** | **Miscellaneous** | **Demos**

Graphics

AMP3 – Graphics Pack 1 Clip It! clip any part of the screen and save to disk, Filter Pics manipulate pictures with enhancers, edge definition, colour and size shifters, Amiga MCAD excellent CAD package. IFF to pieces jigsaw program, ROT 3D drawing prog, VDraw V1.19 brilliant painting program, Ray Tracer Generator.

AMP21 – Graphics Pack 2 – DBW Render a very good Ray Tracing utility, Mandelbrot Explorer. Excellent full features mandelbrot designer, ST2IFF convert Atari ST pictures to Amiga IFF format. HAM Editor drawing program. HAM to IFF convertor.

FFISH 295 – Mandel Mountains V1.1. Mandel Brot Generator.

FFISH 334 – FBM is an image manipulator and convertor : Sun, GIF, IFF, PCX, PBM bitmaps, Can input raw images, and output PostScript & Diablo. Also does rectangular extraction, density and contrast changes, rotation, quantization, halftone grayscaling etc. etc. etc.

Utility Stop Press! We have loads of excellent utility disk compilations, containing dozens of excellent utilities. Our DiskCat has a fast search option for the best!



Full details of all our disks are in our 70p disk based catalogue

Games

AMP8 – Game Pack 1 – Clue as in Cluedo, Othello, Klondike, Canfield, Cribbge, ackgammon, Yahzee, TVision, Missle ommand, Cosmo 2, 3D Breakout, Empire, Gravity Wars, Hanoi, Hockey, ikoff, Jackland, Othello Master, Pacman, all rilliant PD games. 3 disks only £7.50!

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PDOM 90 – Tennis! The best shareware game on the Amiga. Excellent! Requires 1Mb of RAM.

PDOM 79, PDOM 80 & PDOM 81 – Star Trek 3 disk game. Amazing graphics! Fully working. Brilliant! Requires 1MB RAM.

PDOM 215, PDOM 216 – Star Trek 2 disk game. Totally different, and even better excellent game!

PDOM 233 – The Holy Grail Adventure Requires 1MB RAM. Excellent adventure!

PDOM 234 – The Golden Fleece Adventure. Excellent!

PDOM 283 – Callisto, Daleks, Pontoon, Puzz, World text adventure, Zerg fantasy role–playing game

Utility

FFISH 327 – Msh handles MSDOS/ST formatted disks. You can use files on such disks in almost exactly the same way as you use files on native AmigaDOS disks. This is a fully functional, read/write version.

PDOM 62 – The Public Dominator Anti Virus Disk contains all you need in the fight against viruses.

FFISH 342 – IE V1.0 is an icon editor up to 640x200 pixels in size also dual render. Fully featured.

FFISH 244 – Boot Block Champion V3.1 load, save and analyze boot blocks. BootIntro V1.2 you specify The headline text of upto 44 characters and the scrolling text of upto 300.

PDOM 277 – Dark Star Virus and Crunchers 2: BS9 KillerX, Kill'Em, Lamer Destroyer, Pseudo Ops, Killer and Seek & Destroy virus killers. Byte Killer, Crunch Master, Data Cruncher, DefJam Cruncher, Crunch IFF Pics with shower, DPaint Unpack, DragPack, Flash Packer, HQC, ISC, Master Crunch, Mega Crunch, Power Pack, RSI Cruncher and Super Cruncher.

PDOM 278 – LHARCa V0.99a the file compressor 100% compatible with MSDOS LHARC V1.13c.

PDOM 279 – European Software Agency Utility1: Amiga Tool V1.5, Boot Intro V1.0, BootGenerator V1.5, BootLeg V2.1, Character Editor V1.0, DCopyII, Deluxe Presed V2.0, Block V1.3, Font Ripper, Guru Maker V1.0, ISC Amiga v1.5, memory Searcher V1.0, Power Packer V2.3a and many more all on this one disk!

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PDOM Clip It! Vol1. Nearly 3Mb of clip art in standard IFF format. Subjects covered are varied but are mainly: sports, flags, animals, cartoons, humorous, Christmas, Jewish, borders, Halloween, Valentines, horses, eyes, alphabets, hands, 1930's trade marks, zodiac, cars and many more. All compatible with DPaint II. All in black and white. 5 disks full.

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Miscellaneous

PDOM 211 – NorthC the latest all features excellent C compiler. Suitable for beginners and the knowledgable alike. Fully comprehensive.

FFISH 337 – CManual V1.0 is a complete C manual for the Amiga which describes how to open and work with screens, windows, graphics, gadgets, requesters, alerts, menus, IDCMP, sprites, etc. Includes huge manual file and over 70 fully executable examples with source code. When unpacked fills up 3 disks.

FFISH 314 – A68k v2.61 the 68000 macro assembler. Excellent.

FFISH 339 – PCQ V1.1cis a freely redistributable, self compiling, Pascal compiler. The only major feature of Pascal that is not implemented is sets.

FFISH 349 – MED V2.0 is a music editor much like SoundTracker with MIDI sequencing.

AMP11 – 5 disks full of Sonix files with the PD Sonix player. £12.50!

AMP23 – 5 disks full of Soundtracker files includes Sound Tracker versions 1,2,3 and 4. £12.50!

PDOM 285 – Game Music Creator. Supports MIDI, can handle all types of samples –IFF with loops, Raw etc., both contignous and pattern recording, Note half stepup/down function, 64 patterns in memory, can load both Soundtracker & SoundFX songs (converted with GMC conv.), Replay routine brutally much faster than Soundtrackers, Includes Pattern break, Position jump etc etc...

Demos

PDOM 212 – Red Sec… CEBIT '90 demo. Another excellent demo from RSI!

PDOM 213 – Rebels Coma demo an absolute brilliant non stop demo totally different, and ve… original!

PDOM 214 – Fractal Flight. Created by HyperCube Engineering fractal landscape genera… Requires 1MB RAM BRILLIANT!

PDOM 148 – Escape from Singes Castle another amazing animation demo of the interactive game. Excelle… follow up to Space Ace!

PDOM 1 – The Walker Demo I is a mega animation demo that requires 1Mb RAM.

PDOM 2 – The Walker II the mega mega animation demo that requires 1Mb RAM.

FFISH 196 – Stunning digitised HAM pictures. Excellent! The quality is astounding.

PDOM 27 – Alcatraz Mega Demo II. Mega!!

PDOM 65 & PDOM 6… Red Sector Mega Demo. THE best demo on the Amiga! Amazing graphic… fabulous sounds, astoun… ing vector graphics!

PDOM 73 – Star Trek Enterprise Leaves Dock.

PDOM 74 – Star Trek the Starship Enterprise flying around in a circle.

PDOM 76 – Star Trek Shuttle landing on the S… Enterprise.

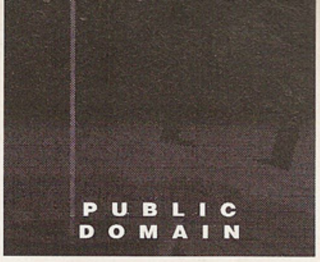
PDOM 83 – Space Ace demo. Excellent aniamtion with excellen… sampled sound!.

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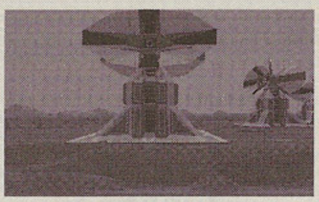
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Demos CORNER





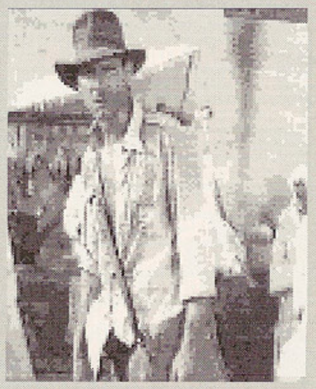
STATION ANIM
Senlac PD

IF you are lucky enough to have a machine kitted out with at least 1.5 Mbytes then this stunning sci-fi animation sequence is a must. Shuttle crafts skim the desolate landscapes with searchlights swinging across the surface as spaceships swoop in to land on the strip next to the huge, rotating satellite dishes. It's so good it could very well be the intro to a sci-fi film!

RAIDERS DEMO
NBS Disk 519

Think of the most famous part of Raiders of the Lost Ark. No, not the big stone ball, the other one. You know, the bit where there's the bloke with the sword and he's got his whip and... Oh, watch this piece of digitised animation, then you'll remember!







POPEYE MEETS THE BEACH-BOYS
Crazy Joe's PD Disk 747

Not much to look at here, but the superbly humourous sampled sound more than makes up for it. Here the spinach-eater himself croons along with those surf-swingers – if they can keep Bluto and Bowie away, that is!

WORTH CHECKING

Got all these wonderful demos already? Dying to spend a little bit more dosh to expand your collection? Well here are a few demos with something worth checking out - if you're into that kind of, sort of, type of 'thing', like, ish. Er... shall I start again? Naaah!

Fans of Acid and House may feel like having a blast of even more tracks by the Beatmaster. Magnetic Beats 2 and 3 from 17 Bit Software contain Club influences ranging from 808 State to Kraftwerk. Or there's the Cartoon Music Demo on Crazy Joe's Disk 777, which has some rather naughty language and silly pictures to go with the tunes.

If smooth ray-traced animations are the bag you're into, then have a shuftie at FRP Productions' Flypast from Senlac or the Shark Demo from Crazy Joe's (Disk 773) for some pretty pictures with which you can amaze friends and bore to death people who hate computers. Others of note are TDRS and Radio from Senlac for atmospheric anims, or At the Movies for a much more jocular cartoon that will have you rolling in the aisles with mirth.

Remember the good old C64? Well, for a bit of nostalgia check out the Matin Galway song disk from Crazy Joe's (disk 835) and relive the sounds of the SID chip with every single jingle and tune from the game Rambo. Aaah! Takes me back...

Fractals? Fings of the future, ain't they? Nova PD have got a nice demo with some nice fractals backed by a piece of pretty music. Chill out... er... man.

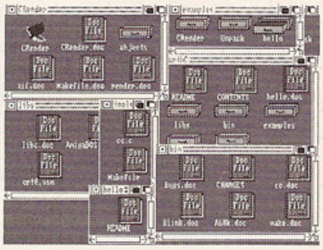
More music abounds in the form of Nic Cusworth's latest via 17 Bit (Disk 637) for that heavy Tackhead/Gary Clail beat. On-U Sound in the Area! If that's a bit too heavy for you then the superb representation of Zoolook on Disk 242 in the Public Dominator series may be your cup of tea.

ing up with one of the players to stomp on the current strongest player and the next they've ganged up on you to stop you getting the upper hand. Great fun for backstabbers everywhere.

Jeopard runs in interlace mode and uses some rather small text, so I wouldn't recommend it if you are using a TV rather than a monitor. It also does not have the option for a computer player, which is a pity. You can only play it with a friend or seven.

NORTH C
Amiganuts 645

One of the few computer languages available in the Public Domain, North C is now available from a number of sources. The above is the best implementation for its update number (V1.1), ease of installation and price.



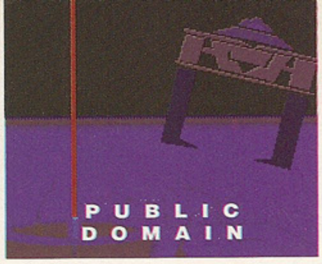
Included within it are Blink (the C linker which supplanted Alink, Commodore's original C linker) and the PD A68K 68000 assembler programmer written by Charlie Gibbs. North C is a real enthusiast's language, with many different points of origin.

As well as some copious documentation on the disk, Amiganuts also offer disks 649A and 639 B and C. These three contain a full C tutorial written by Amiga enthusiast Anders Bjerin.

If you want to try your hand at C programming, this set of disks is the one to go for. Anders Bjerin has even set up an international C programming club to provide an exchange for help and also the promotion of new ideas.

DIRECT ACTION
(1 Meg)
Senlac 670

This must be one of the worst programs I've yet seen in the PD libraries from the user friendly point of view. There's no documentation available without going to



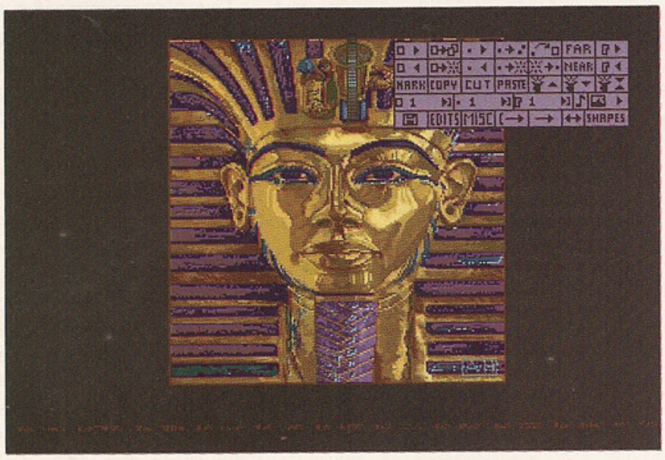
the CLI, and if you didn't already know it was an animation/movie package it would take no small while to find out.

All the options are displayed on one window, and there's precious little explanation of them. The best way to discover how to use Direct Action is to muck about with it.

Getting to grips with it isn't so bad, as an example animated sequence is included on the disk. Called Tut-Tut, it features King Tutankhamen's death mask undergoing various contortions when a fly lands on it.

Direct Action also has the ability to play samples along with moving graphic images. If you want to make some movies on your Amiga without buying an expensive package, give it a look.

TOP TEN PD Senlac Top 10 PD	TOP TEN DEMOS Premier PD Top 10 Demos
1. Soundtracker version 4.0	1. Puggs in Space
2. Games Music Creator	2. Mahoney and Kaktus 2
3. All New Star Trek	3. Walker Demo II (1 meg)
4. Battleforce V3.6	4. Knight Animation (1 meg)
5. Moria V3.0	5. Exodus real 3D
6. Vaux Killer	6. Alcatraz Megademo 4 (3 disks)
7. Direct Action	7. Digital Concert II
8. Full Force 101 utilities	8. Trilogy Megademo (2 disks)
9. Sid	9. Gymnast Animation (1 meg)
10. Powerpacker V2.3B	10. Newtek Demo Reel 3 (1 meg)





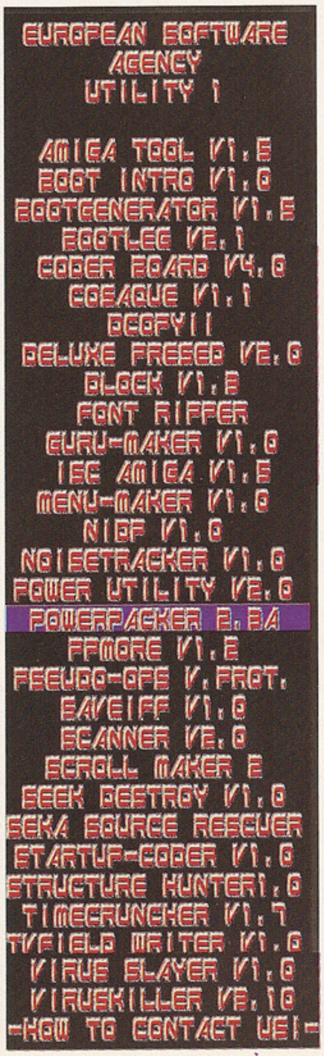
ESA Utilities Disk 1 PDOM 279

A novel array of utilities, most of which are only occasionally useful. If you don't have any utilities at all, though, it makes a good bargain bucket (there are 35 utilities in all). Even someone who has owned their Amiga for years would find something of use here.

There are programs on here to write startup-sequences, to kill viruses, to copy disks, to create strange bootblocks, and so it goes on. Incidentally, ESA stands for European Software Agency, a few Swedish enthusiasts who got together and knocked out some simple but useful programs.

There are quite a number of similar PD disks around crammed with utilities, but this is definitely one of the better ones. It's so easy to select the programs by scrolling down the list: much easier than using Workbench icons, directories and so on. The utilities vary from Noisetracker to Font Ripper. No matter how long you've had your Amiga, there's something on here that's useful.

Before you write this one off as pointless, how long does it take you to get to Workbench and the CLI to do things like DISKDOCTOR faulty disks? All you have to do using this disk is reboot with it and select an option. It can make quite a difference to how fast you can do things, especially if you only have one disk drive.



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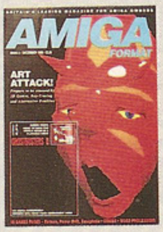
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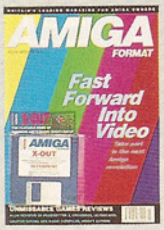




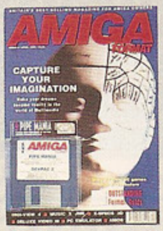


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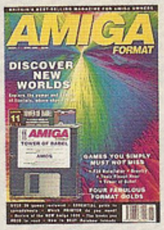
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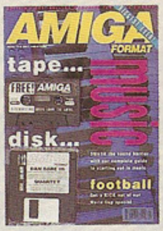
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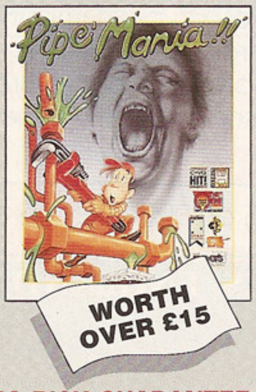


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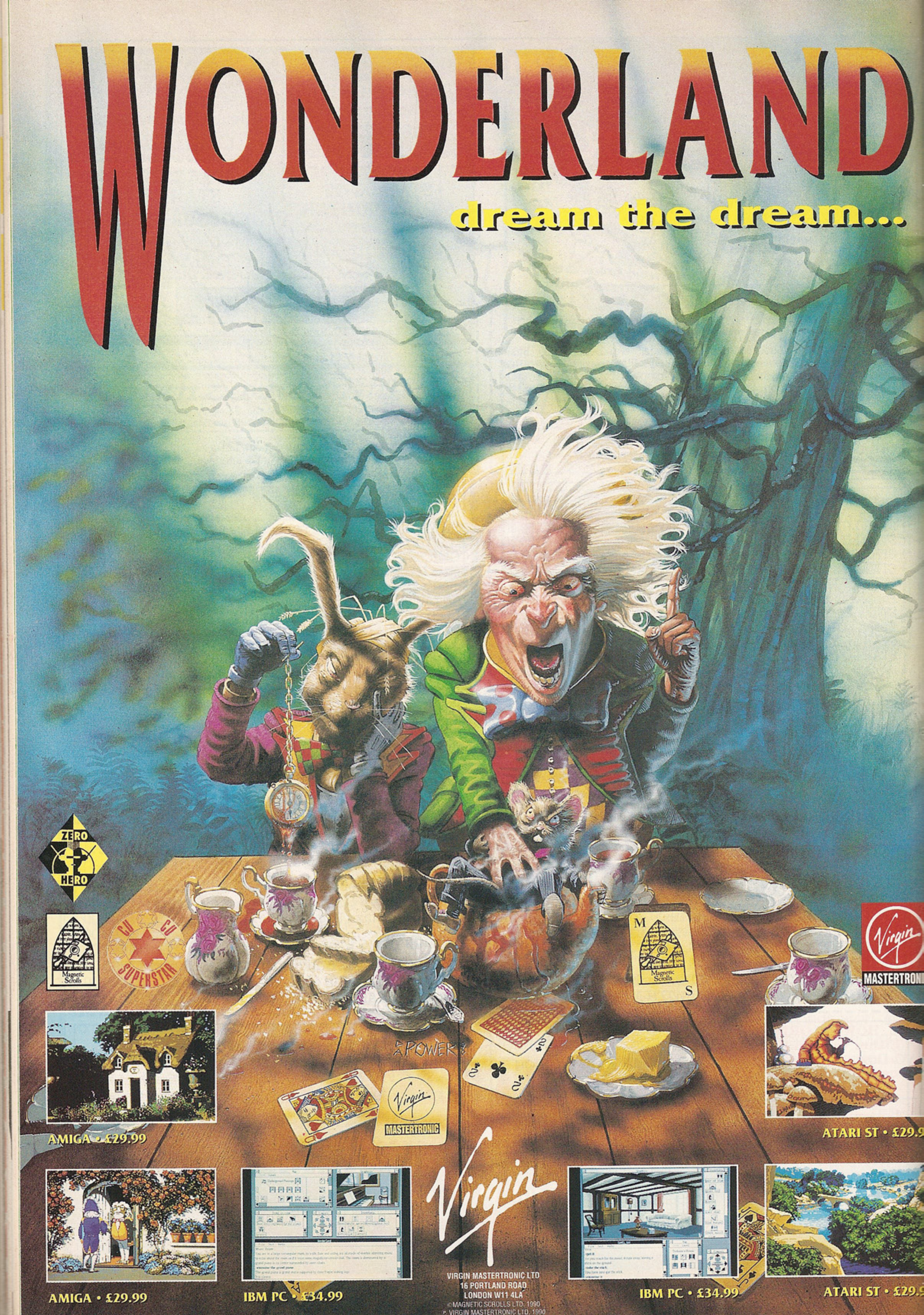
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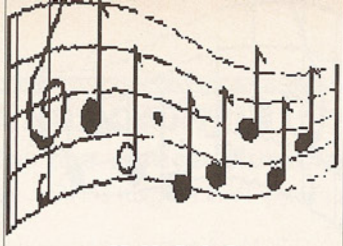
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ROLL TAPE, Cue Amiga

Professional recording studios are now using the Amiga as their main machine, so JON BATES went to visit a couple.

At present there are still not many recording studios that use the Amiga as their main machine. There is no great reason for this, other than that the software for other computers – such as the ST, the PC and the Macintosh – has been around longer and is better established.

However, since sales of the Amiga are now outstripping these other machines, it seems logical that people making music at home are going to use the Amiga. When they take the plunge and go into a studio to make a demo they will tend to choose a studio that has an Amiga.

I picked two studios which are already using the Amiga, to visit and check out their ways of working. It was interesting that neither of them had the expensive paraphernalia of hard disks or super expanded chip memory – just a good old A500, probably just like the one that sits on your desk at home.

TAKE ONE

Monumental Music is situated in a small modern factory unit down in the Garden of England, Kent, at Gillingham. Started at the beginning of the year, it is a 16 track studio used by bands for either demo or in some cases full blown productions for release. The software is Music X and AMAS. The studio's main men are Andy Moss and Blane Turner.

Format: *The idea of using the Amiga and Music X with a rock band must seem a bit strange to the band.*

Blane: A lot of bands are surprised because they look at the computer and they don't really know if it is a drum machine or not. When we show them what it does many of them are surprised that it doesn't sound like a computer, simply because they are unaware as to what the Amiga can do. The Medway [which is the area of Kent where Monumental are based] is very much a 60s and 70s psychedelic musical area and always has been, with jangly guitars and loose-sounding drums.

Format: *Do you think that many people have been 'brainwashed' into thinking that all sequenced music sounds like a Stock, Waterman and Aitken production?*

Blane: Yeah, that's how they see sequencing and computer music. The musicians don't realise that it can actually be used creatively for live music. I use samplers, sequencers, whatever, to enhance whatever they are doing. I use it when I'm recording my own stuff all the time – they get lost in the fact that it is a computer.

Andy: We've even thought of using our other Amiga just to play games on to keep the bands amused while they wait to do bits in the studio.



ABOVE: Hard at work at the Monumental studios in Kent. The Amiga, just visible beside the keyboard on the right, is used mainly for sequencing, in combination with *Music X*. The computer has also shared duties as diverse as keeping bands amused and sampling sounds from games for use in a novelty record by 'The Curry Crew'!

Format: *How do you work with bands who are anti-computer?*

Andy: What usually happens is that we will get them to lay down the drums and bass along with an SMPTE code. The keyboards we record from the MIDI out directly into the Amiga and as long as the band are playing in time, all is OK. This means that we have a large scope to play with on the keyboards, we can check out parts, try it with different sounds, add extra bits and remove them if they don't work, all before we commit it to tape.

Format: *How exactly has the Amiga helped you?*

Blane: It's speeded up the production side immensely because you can put in passages – sections on keyboards – and try out different sounds very quickly and when you are mixing you get a much better sound quality because you are mastering direct from the keyboards rather than from tape.

Format: *Is that using the MIDI volume control?*

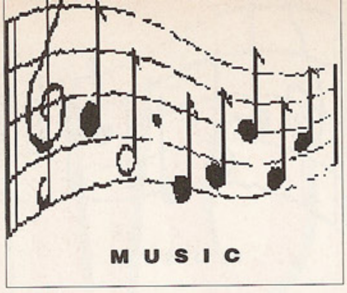
Andy: I have used that, especially for drums, and also the velocity levels and of course the quantise option on *Music X* for smoothing it out.

But bearing in mind that a lot of our stuff is coming from the sampler [which is a rackmount Casio FZ10] how we tend to work is to do a pre-production run on the YS50 [a Yamaha multi-timbral keyboard] and then reassign the sounds to the Casio and then record it, using the SMPTE lock in with auto-locate... There's a lot more to *Music X* than we use at the moment.

[A quick explanation, here. Their main recorder is a Fostex E16 16-track machine. One track is 'striped' with SMPTE code. This is fed to a Fostex 4050 synchronizer which converts it to MIDI Time Code, which is fed into *Music X*. *Music X* will line up and run at exactly the same speed as the tape; any rewinding will cause *Music X* to rewind also to the same point. The first version of *Music X* they had failed to do this and they contacted Microlllusions in the States direct, who sent a corrected version.]

Format: *What about the voice programming aspect?*

Andy: Yeah. I've used that with my Casio CZ3000. I saved all the patches on the librarian. The librarian on the new version, though, doesn't seem to work. The old version does. If I load the sound dumping protocols some of the command lines compared with the old version are actually different.



All I did was write down the old program data and copy it into the new version and it worked. But I can't understand why they've altered it. It had totally different sound dumping protocols in the pre-release version to either of these. Every version is different. The stupid thing is that if you save a sound dump file from one version, it won't load into another.

Blane: One of the limiting factors with studios is that you get all this mega sequencing stuff but you can't afford all the multi-timbral hardware to use it all. The Casio will do eight [channels] and we've got a TX81Z that will do eight and that is your 16 channels used up.

Having said that, the Casio is not particularly a user-friendly sampler and we often end up dumping the sounds separately on to tape. It's got the same sound quality as an Akai (S950) but as far as the editing and using the damn thing goes it's difficult. But there again you're paying a lot more for the Akai. In fact a lot of people are buying two Casios instead of one Akai.

Format: *The Casio sampler will do MIDI sample dump. Had you thought about getting a sample editor like 'Sound Wrench' [not available in this country yet] and editing the sounds up on screen?*

Andy: The Amiga is only expanded to 1 meg and to be quite honest that's all I need at present. But that's a good idea. We could expand the memory to about 4 meg quite easily, have a hard drive and then swop from what you are doing on *Music X* to editing MIDI sample dumps of the Casio. The Casio sounds would then be on hard drive and so loading them would be virtually instantaneous. All the sounds for the other modules could be held on disk as well and run from *Music X*.

Blane: The part I don't like on *Music X* is the event editor. As someone who is essentially a musician and sound engineer and a non-computer person, I find it hard to cope with. I mean I've got used to using the program now and most of it I find quite easy but maybe the layout should be more friendly for an an engineer – even more like a mixing desk and recorder.

Andy: Commodore should push more into studios and they should include MIDI interface as standard on their new models. It's a terrible omission and they could have sold an awful lot of machines into studios if they had done that. I think that as programs that were designed for the ST and Mac become more widely available on the Amiga, the Amiga will take over and become more of an industry standard.

> “We did a spoof record by a put-together band called 'The Curry Crew', actually using the sound-track from a game called *North and South* which has got swords, horses and cannon effects. It got played on the local radio”

Format: *What about records made here using* Music X*?*

Andy: One of the records that was done here was a spoof record by a put-together band called 'The Curry Crew'. For that we actually used the soundtrack of a civil war game, *North and South* from Infra Games, which has got swords, horses and canon effects which we actually used on the record. It got played on the local radio and we were interviewed as well. We had 22 people in here doing that track, they had a lot of fun.

Blane: They tried to do a 'Pump up the Bitter' type of record about a curry house. The idea was very good and so was the basic track but the result was not as funny as it should have been.

Andy: We had sampled burps and we even sampled the toilet as well.

Blane: The whole thing was run from *Music X*, all the samples were triggered off from it and we even sampled all the vocals and triggered them off from the Amiga as well. Each vocal line of the rap was sampled and then dropped in back in all in time, moving the start point for each line about on the edit page until it fitted the backing track.

Andy: We used the facility on *Music X* for internal samples and took the war game samples directly from the game and copied the data files into *Music X*.

As well as records we also do voice-overs for local radio and DJs' jingles with the backing all done on *Music X* with the Casio sampler. Some of them use Blane on guitar with the backing on *Music X*. Blane used to do some of the Steve Wright jingles for Radio 1.

Format: *The sound desk you've got is an Allan and Heath Saber. Does it have any MIDI facilities on it?*

Andy: Yes it does and we use them. It will mute any channel via MIDI and *Music X* and it works well. We take up a channel on the sequencer to do this and it helps in the mixdown stage. If we record the mutes in real time then on playback the channels are switched on and off exactly on time – we can always edit and quantise this to get it spot on. All our outboard equipment – the effects units – has MIDI on it as well so we can switch them in and out. It would be nice to have some memory dump routines for these on *Music X*.

Format: *Have you considered linking both Amigas and maybe doing combined music and graphics?*

Andy: One of our partners is quite a talented artist and the other is into serious computer programming. I guess that if there is a market for that sort of thing we could do it. If we start getting into advertising as we want to then there may be. But unless we're going to make money out of it there's not a lot of point. There are markets around here that we have stretched to reach. We're thinking of using it for a label printing facility as well for tapes which could include designing logos etc. It's quite easy to set up. I do all the studio newsletters and information on the Amiga using *Pen Pal*. I also use it for the accounts.

Out-take

Really what we have here is just a blown-up version of a home studio. Anyone with a four-track and an Amiga can get good sounds from it, it just depends how far you want to take it. The Amiga means that you can not only sequence MIDI gear but also use the internal voices, in some cases with your own samples. Since you are recording direct to tape at mixdown the quality is very good.

You can always improvise recording methods – record the vocals in the bathroom. In Blane's last studio his reverb unit consisted of a sheet of steel with two record cartridges at the one end, housed in a sort of Cindy Doll cabinet. At the end of the day it is not merely the quality of the equipment, though, it is the experience of the guy using it. It's a blown-up hobby that has spread into a being a business.



RIGHT: Steve Perry of AudioMatrix busies himself at the keyboard of his Amiga 500.



BELOW: Back in the Monumental studios with the Fostex tape recorder looming large.



TAKE TWO

Our other Studio is in Cardiff. Housed in part of a refurbished Victorian warehouse, AudioMatrix shares its premises with an advertising agency and is not a million miles from the HTV studios. Steve Perry is the man in the hot seat.



Steve: I'm basically a drummer turned guitarist who built his own studio as it was the best way to record my own stuff. I was in a band, left the band, bought a four-track and starting writing songs for myself. The first piece of equipment I got was a drum machine, because the neighbours complained when I started miking up the drum kit (!) and I built up from there.

Format: *Why an Amiga?*

Steve: Mainly because there was a good deal going from Commodore, the education package, which included the *Dr T's MRS* sequencing package. The studio has been running for about two years but it hasn't been computerised for that long. I used to have an ST with *Steinberg Pro 24* but really the Amiga does all that I want at the moment. Obviously in terms of sequencing power I've gone down from 24 to 8 tracks at the moment but the long-term possibilities seem greater as it has so many facilities. I use 'Paintbox' a lot for graphics and designing as well and I think it was the combination of graphics as well as music that sold it to me.

I use it for my own work more than with bands. I don't use *MRS* as much as I'd like because with live bands in the studio it tends to be time-consuming; it is a rather long-winded way to go about it.

Format: *What equipment do you make use of generally?*

Steve: Roland MT32 sound module, PR100 sequencer, Yamaha DX100 and RX17 drum machine. If I need to sample stuff I will tend to hire one in for the duration like an E-Max, which I find very easy to use, although a lot of studios prefer the Akai S1000. So far the demands on the studio haven't warranted me spending lots of money on new synths. If a piece of kit is vital then I'll hire it in.

Format: *Have you used the internal sampling, or sampling software on the Amiga at all?*

> "I do quite a lot of work for cabaret acts who want backing tracks. They tell me what songs they want to do and I write them on the Amiga. Then it's very easy to alter it. It's a bit time-consuming, but it pays"

BELOW: Steve Perry's studio, AudioMatrix in Cardiff. Cluttered, certainly, but used!



Steve: No not really. I've never tried them out. I'm thinking of trading in *MRS* and getting another Dr T program, maybe *Tiger Cub*. *MRS* is quite limited and a bit long-winded and I hate the editing which is all numbers. Another problem with MRS is that you can't take an output from another sequencer, say the PR100, record it into the program and then de-scramble it into separate channels to edit and work on them. I mean I've got 40 or 50 songs on the PR100 which I can't work on at the moment because of this. I think it was a very good program to get started but I feel that I have now exhausted it, outgrown it, you might say.

Format: *Do you ever get musicians who have an Amiga at home?*

Steve: Yeah, I've had bands who basically walk through the door with a disk in their hands

Format: *Apart from bands what other kinds of work have you used the Amiga for?*

Steve: I do quite a lot of work for cabaret acts who want backing tracks. They tell me what songs they want to do and I write them on the Amiga. Then if it isn't quite right, it's in the wrong key or something, it's very easy to alter it. It's a bit time-consuming but it pays.

Local radio is a bit of a closed shop around here and difficult to break into doing adverts, so is S4C (the Welsh Channel 4) as they nearly always use one particular studio in Cardiff. Recently, though, I have done some work for HTV with a composer called Mike Christie. They're doing a series on building different instruments, I don't know the title of it, and the soundtrack for it is being done here. For that he brought in his copy of *Music X*. He works on the tracks at home with his Amiga and brings the disks in here to record them properly along with his Korg M1 (synth).

Format: *How do you set up to work with the sequencer and multi-track?*

Steve: I've got an XRI SMPTE unit which I use in conjunction with the R8 (Fostex 8 track recorder). I 'stripe' one track with time code and then use that to generate MIDI timing clocks which I feed into the Amiga.

The pain with *MRS* is that it doesn't have any Song Position Pointer or Midi Time Code facilities. This means I have to go back to the beginning of the track each time when I'm running the Amiga and multi-track together.

A friend of mine has *Music X* and I think I might well get that from what I have seen of it. It might save me having to re-patch all my equipment when I want to do something. In fact working with *Music X* on the HTV series has pretty well sold it to me. It's so much better than what I've got at the moment and it's easy to edit on it.

I do lot of stuff with live drums and guitar and use the SMPTE facility to sync up what is on tape with the Amiga sequencer. I mix directly from the Amiga to the master [tape] without going onto the 8 track. It gives me 8 more tracks to use doing it that way. Sometimes I put the drums on 7 tracks of the R8 and use the Amiga for everything else. [One track on the recorder is needed for the SMPTE.]

Format: *Apart from upgrading and adding to the software, have you any plans to move into graphics or something like that?*

Steve: The next stage is to link up a video with the Amiga to do video sound tracks which is something I will need to do for more TV work, using one track of the stereo video as a time code. I will need a sync box for the R8 which is a bit pricey. It will be great, though, because I will be able to sync up the multi-track and the Amiga to the video.

The trouble with this sort of business is that you're always broke. The hardware becomes obsolescent quite quickly and you have to update all the time. I bought the MT32 when it first came out and a few months later Roland brought out the D110 which is much better.

It would be useful to have an editor for the MT32 and if I expand the Amiga's memory I think I could get one to run along with the sequencer. I'd get a lot more from the MT32 and it would take a lot less time to set up. I don't know a lot about computers though – I tend to do what the program tells me. ■


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MUSICAL Mechanics

How many of you music buffs have drooled over the samplers advertised in the music technology magazines, wishing you could afford the £2000 asking price? MAFF EVANS checks out a less expensive option and lets the drummer get wicked.

In the early 1980s an Australian company came up with a machine that has revolutionised the music industry. The machine allowed musicians to record real sounds into a computer and replay them at various pitches on a keyboard. The machine was called the CMI (Computer Musical Instrument), but is more widely known by the company name – the Fairlight.

Innovations such as this invariably come with a suitably high price-tag, and the Fairlight's ran into five or six figures. As other companies latched onto the musical potential of sampling sounds digitally the technology became cheaper, but for the most part the prices of today's samplers are still well out of reach for the average amateur musician.

Now we have high-power 16-bit computers in the home, sampling is no longer the sole property of the rich studio-owners. The same technology is available to the home user (albeit in a cut-down form) at a considerably more reasonable cost.

One, Two, Three – Hit It!

A number of samplers are available for the Amiga, offering various advantages such as high-quality sampling, built-in sequencers or even innovative editing systems, but one series of samplers has managed to gain more acclaim than any other – the *Audiomaster* series from Aegis.

Audiomaster II is widely recognised as the standard Amiga sampling system, due to its high quality and simplicity of use. For some time, rumours of an updated version in the form of *Audiomaster III* have been keeping Amiga music fans waiting with bated breath. Now all those blue-faced sample freaks can breath a sigh of relief, since the all-new, all-singing and all-stuttering sampling system has arrived.

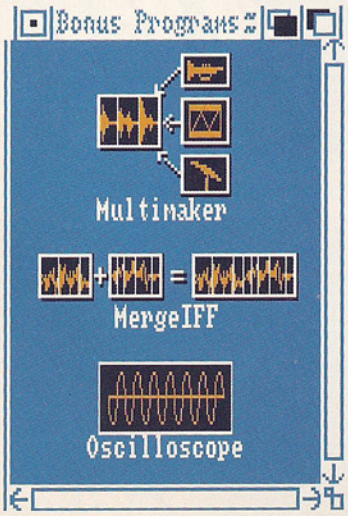
Genetic Engineering

Audiomaster designer Peter Norman wasn't too happy in his dealings with Aegis, so Australian company Ramscan have stepped in to publish the new package under the name *Audio Engineer*. To confuse things even further, the system will still be available through Aegis distributor Oxxi in the States under the expected name of *Audiomaster III*. In its native Australia the system is available in two versions: either as a complete hardware-and-software system, or as a software-only package for those who already have sampling hardware.

In the UK, by contrast, only the complete package is available, containing the software along with a high-quality piece of sampling hardware produced by GSoft, which is capable of sampling up to 56,000 samples per second. The hardware itself is a solid, well-designed six-inch box which connects to the Amiga's parallel port via a ribbon cable. The hardware has facilities for either mic or line inputs, so that a microphone or stereo system can be connected with ease, and two input-level dials have been mounted on the front of the sampler to allow the input gain to be quickly and easily adjusted. This latter facility means that you can concentrate on getting to grips with sounds, rather than having to fiddle around at the back of your machine with a screwdriver set.



ABOVE: The GSoft sampling hardware gives superb quality sound recording to provide you with crystal-clear samples.

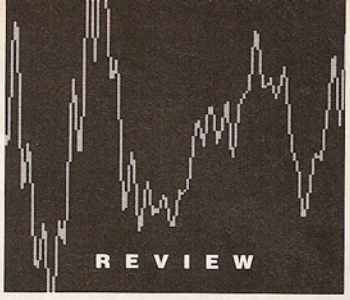


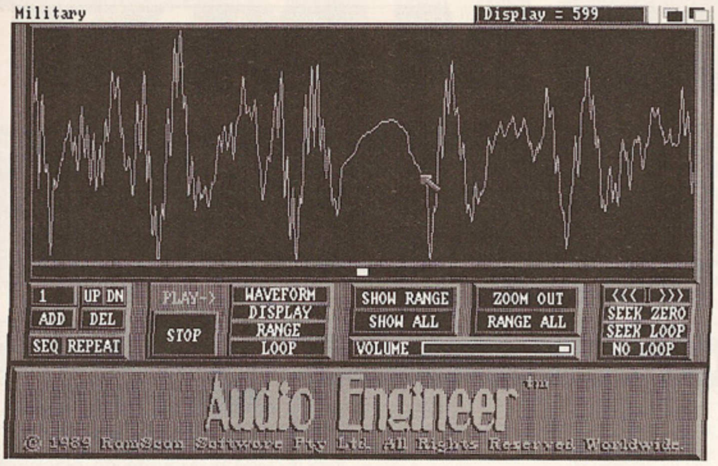
LEFT: Along with the editing software, the *Audio Engineer* disk also contains a set of bonus programs, used to manipulate sounds further.

Doctoring the Disk

As well as the sampling program, the *Audio Engineer* disk contains a series of bonus programs and tools for manipulating samples.


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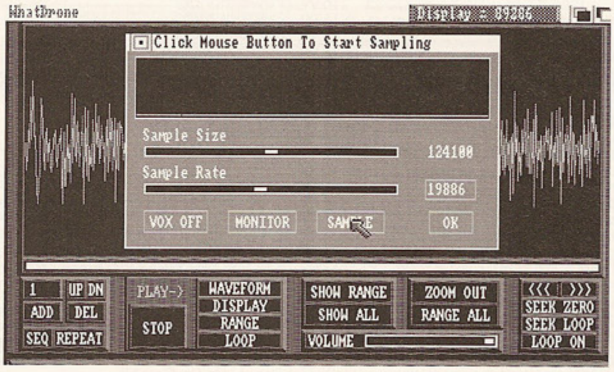
LEFT: The Freehand Edit option can be used to smooth out 'spikes' in a sound, to remove any clicks or buzzes picked up in recording.

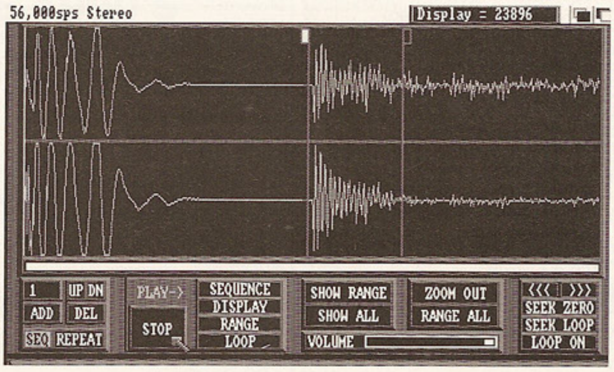
BELOW: Sampling can be started by hitting the mouse button while the software monitors the signal, or by an automatic trigger.

By calling up the CLI, commands can be used to play up to 20 samples under interrupt, merge two mono samples into a stereo sound and turn IFF files into raw data.

The other tools can be called up directly from the Workbench. These include a program to merge two IFF files together and a tool for creating multi-voice sounds for use in programs such as *Sonix* or Electronic Arts' *Deluxe Music Construction Set*.

Also on the disk is a simple oscilloscope program, which allows you to calibrate your sampling hardware, so that the best possible recording is achieved. So now we've looked at the various tools, what about the *Engineer* itself?





ABOVE: By sampling a section of a song and setting various loop points, a sequence of loops can be built up to give the impression of playing an entire track just from a few short sections.

Looping the Loop

On first sight, the sampling software looks similar to *Audiomaster II* and, sure enough, the editing system works in much the same manner. The main area of the screen is taken up by the waveform window, where a graphic representation of the sample is displayed. Below this is a series of buttons, which control the display, loop settings and sample playback.

Editing is controlled by dragging a cursor across the display to highlight an area of the sample, which is referred to as a 'range'. This range can be manipulated by way of options in a series of pull-down menus.

As well as the usual cut, copy and paste options, the sample can be blanked to zero, have its volume increased or decreased, be flipped or reversed and even have echo added. By selecting 'Freehand Edit' the mouse can be used on the waveform directly, to smooth out clicks and buzzes without having to clip out portions of the sample.

One function which is new to *Audio Engineer* is the Multiple Loop Sequencer, which allows you to create the illusion of having an entire song in memory, even though this would need an awful lot of chip space! In actual fact, the song is constructed entirely from a single, very much smaller sample. This is achieved by setting up a sequence of loops at various points in a sample and setting a point at which the sequence begins to fade. Since most modern music consists of a series of phrases repeated in a set pattern, a short section of a track can be sampled, and loops set to mark the intro, the verse and the chorus. By copying and repeating loops in the right places, a simple modern 'intro-verse-chorus-verse-chorus' track can easily be constructed, even down to the fade at the end of the song!

Another useful feature of *Audio Engineer* is that it makes use of all available RAM, including expansions, so that large samples can be tackled with ease. An example of the use of this is quoted by the producers: one person has sampled entire 78 RPM records into an Amiga fitted with a nine Megabyte expansion, using the freehand edit function to remove clicks, setting up loop sequences to skip past the jumps and recording them to digital tape, thus creating a high-quality recording of a previously unlistenable track.

Samples can be saved out in a number of formats, including mono and stereo IFF, five-octave *Sonix* files or RAW data, so that samples can be set up to use in virtually any application you can think of.

PLAY IT AGAIN, SAM!



Once you've 'created' a song from a sample, it would be a bit of bind to have to load up the sampling software just to be able to hear it. Fortunately, there is a CD emulator included on the disk which works like... well, like a CD player really! Simply click on the power button, open the tray and the player will allow you to select up to 20 tracks and play them back using the full play, pause and skip system of the average CD player.

Say Hello to a Good Wave Buy!

The superb quality of *Audiomaster II* gave sample freaks high expectations of the updated version. Now that it has appeared, it is safe to say that those expectations have not only been fulfilled, but have also been surpassed. The full package includes one of the best pieces of sampling hardware available for the Amiga. The construction of the GSoft device is solid, the controls and ports are easy to use and, perhaps most importantly, the quality of sample recording is extremely impressive.

The software itself provides the perfect companion to the sampling hardware – in other words, it's excellent! The clear design, the simple layout and incredible ease of use found in *Audiomaster II* has been retained, but with the addition of some very powerful editing facilities. Despite sounding rather 'gadgetty', the freehand curve editing and loop sequencing not only give an impressive show of the software's power, they also come in particularly useful for producing complicated loops to use in various applications.

The asking price for the whole package may seem high, but the quality of the program and the hardware more than justify the money. If you're remotely interested in producing music on your Amiga, then get hold of *Audio Engineer* as soon as possible. It is without doubt the best Amiga sampling package yet produced.

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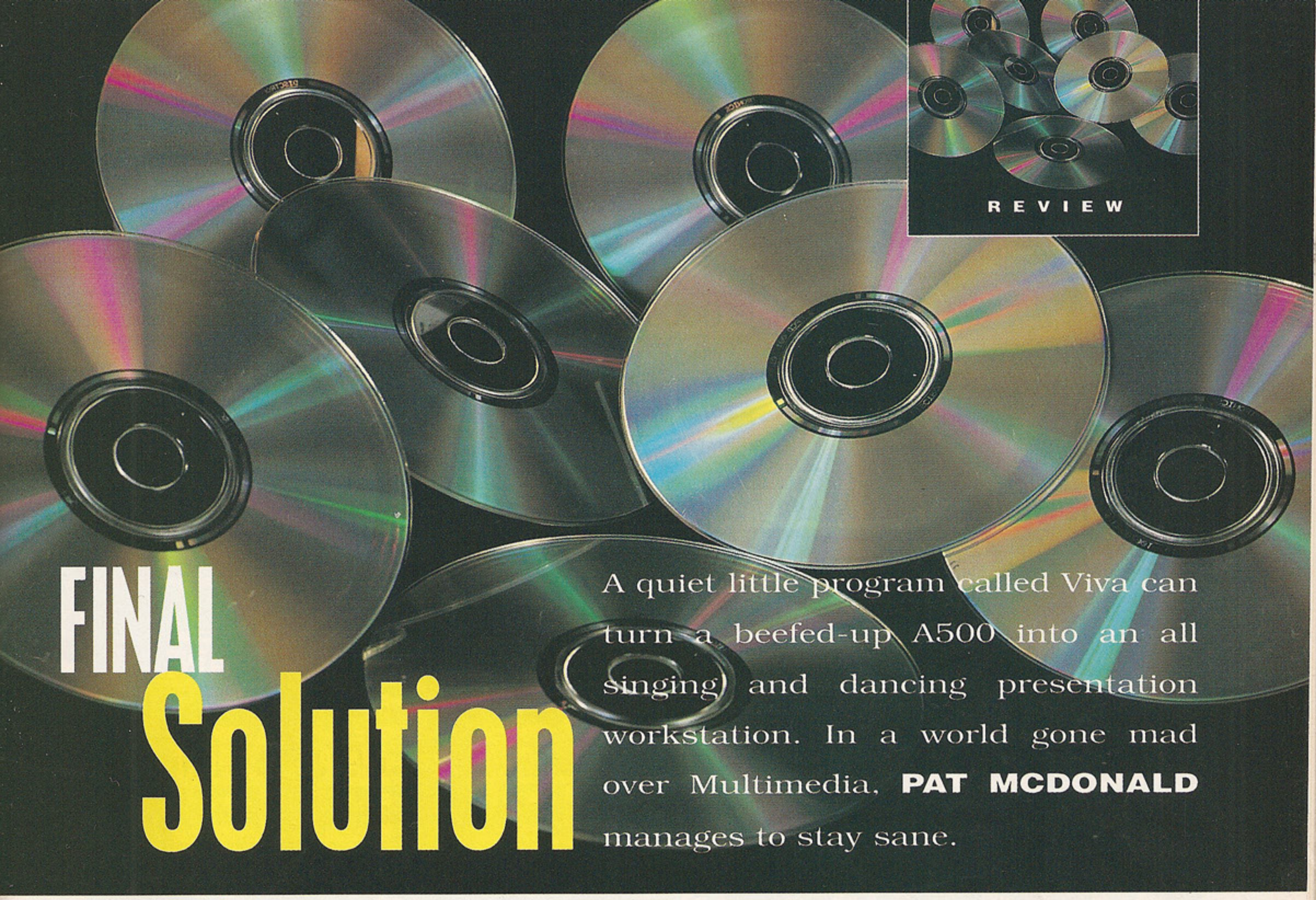
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FINAL Solution

A quiet little program called Viva can turn a beefed-up A500 into an all singing and dancing presentation workstation. In a world gone mad over Multimedia, **PAT MCDONALD** manages to stay sane.

We have all come across slideshow creators, programs which can create displays of pictures. There are sound and video digitizers, to read in images and sounds from the real world. There are video titling and display enhancement programs. Now comes *Viva* (*Visual Interface Video Authoring*), a program which can tie the whole lot together and produce interactive video programs that can be used by anybody with an A500, a meg of RAM and two floppy disk drives. I suppose a TV or monitor would be quite useful too.

Mind you, to use *Viva* to create these programs you'll need more impressive hardware. Manufacturers Michtron Inc of the USA (0101 313 377 8998) recommend an A or B2000 with at least 3 megs of RAM and a hard disk drive. A genlock device, sound sampler, a video digitizer, video recorder and video camera plus a laserdisk would come in handy too. A CD player would be a distinct advantage as would (for the feeelthy rich) a read/write CD configured as a hard drive.

Over the Top

Of course, what you could do with *Viva* is design applications that use resources like video laserdisks et al and sell complete systems. Or you could use it to write programs for the aforementioned 'humble' A500 owner by digitizing all the video and sound information first. Really it's a question

> "Who can say that the next Picasso won't use *Deluxe Paint* and have learnt all his artistic technique from a *Viva* demonstration"

of the sound and picture quality that the application demands. Though, as we know so well, the qualities of the Amiga in these areas are outstanding.

Is there a market for selling interactive video programs? According to the National Interactive Video Centre (071 387 2233) over a hundred companies are now selling them. Fifteen months ago less than half of those companies were in business, so it's a rapidly expanding area. It's not as if the customers are small fry, either: the technology involved is so expensive that so far only major industry has been buying the stuff.

With *Viva*, all that could change. For a start, it would – according to the authors – be possible to use the program to write programs for the new CDTV. Of course, that would be a major operation – you're talking about filling a compact disk, more than 500 megabytes of space. But the market potential for the CDTV can only be described as immense.

Then again, there's also the aforementioned A500 owner, who would probably be blown away by the sort of applications that *Viva* can easily cope with. You could produce point-of-sale or information terminal programs for public places. Translation: those oh-so-nice machines in museums and art galleries that can be questioned about what is on display and where.

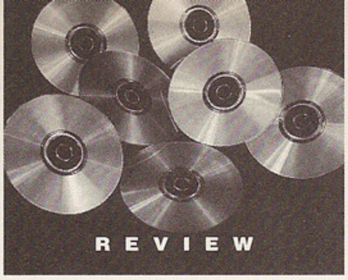
WHAT IS INTERACTIVE VIDEO?

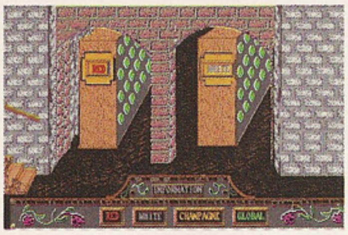
Interactive video systems are television programmes which can be interacted with, rather than being a set sequence. The computer could display a picture of, say, a wild bird, and ask you to identify it, telling you whether your answer was correct or not. Computer games work like this already, the somewhat cosmetic difference being that interactive video uses moving pictures from the real world, rather than computer-generated ones.

The main use for this is in teaching people about the real world. Big corparations, like banks, use interactive applications for teaching staff how to deal with the public, for instance. Such systems in education can also impartially judge pupils' performance and so are in some ways superior to conventional teaching methods using human teachers and books.

Where interactive education falls down is in stimulating the creative abilities of pupils. To teach somebody how to bring out their own innate talent is, I fear, a task beyond interactive video in its present form.

However, just because little has yet appeared that can do this doesn't mean that the next Picasso won't use *DPaint III* and have learnt all his artistic techniques from a *Viva* demonstration...





TELLING A STORY: USING VIVA

The fundamental idea behind using *Viva* is that you don't have to enter commands on a keyboard to create a program. It's all fully icon-driven. First, you're presented with the *Viva* mainframe. To create the steps of a program, you click on the relevant icon and drag it onto the storyboard, which is the screen shown below in all its glory. That's why programs created with *Viva* aren't called programs: they're called stories!

The story (really a multimedia application) which is being edited in this case is intended to help the user make an informed choice of wine. The storyboard occupies the upper half of the screen, each individual icon representative of a single step or event in the story. This event may be the display of a graphic, a text display, or a decision or logic operation of some kind, or it may be an input prompted for or accepted from the user.

The operation of the different elements is controlled when programming by the icons that appear at the bottom of the screen, as explained below.



The wine-sampling program, one of the display screens of which is shown ABOVE LEFT, is made up of the elements in the storyboard ABOVE. Note that the function of each of the elements was programmed using the icons in the function group, which appear on screen underneath the storyboard.

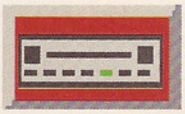
There are 10 icons on the mainframe that deal with the various programming commands. To create a program step, you select an icon, select an option off of the pop-down menu that appears, and enter a filename or value of some kind. The step is then added to the sequence which builds up on the mainframe. Most of the icons are for getting information into the computer or sending it out again: these are abbreviated to Iact, Vid, Aud, Grph, Txt and Comm. Here's a brief description of these programming areas.

IACT:



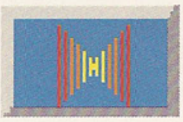
The interactive section. This is used to get information in from the user. Both the keyboard and the mouse are supported, as is a timer. Iact can also be used to branch to another part of the *Viva* story depending on what the end user has input.

VID:



The Laserdisk controller. Any type of laserdisk pictures can be genlocked to Amiga graphics by the usual method (video will come through on any black areas). Laserdisk sequences can also be played on the screen while the computer is busy doing something else.

AUD:



Noisy bits. Only IFF samples are used – they can be loaded, then played and then finally discarded from memory once they're not needed anymore.

GRPH:



The pretty bits. Along with the simple load, play and then discard options there are six built-in video effects. These are fade, blind, dissolve, push, tile and wipe. Both IFF and ANIM files are supported (see below).

TXT:



Putting written messages to the screen or printer. Different fonts can be used (of course, they must always be on the Workbench disk that you booted from) and multiple screens of text can be printed out. *Viva* also supports the Amiga's ability to speak text messages.

COMM:

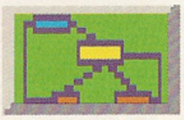


One for modem lovers. Data can be read to and from the serial port, and the protocol can also be changed (that's the rate of communication, the Baud rate, plus various other bits).

Master the Machine

Four icons are used to for the actual programming process. These are Evnt, Lgc, Math and Sys:-

EVENT:



Clever decision making/branching section. *Viva* supports commands like IF, ELSE, WHILE, DO, UNTIL, LABEL, GOTO (which can also do GOSUB), RETURN, END, BREAK and MASTERLOOP. All of these commands should

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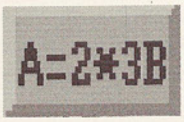
be quite familiar to Basic programmers everywhere, with the exception of the last one, used to make the story restart.

LOGIC:



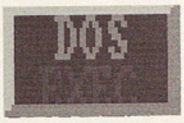
Testing conditions for tough programs. AND, OR, NOT, XOR, EQUAL, LESS, LESS EQUAL, GREATER and GREAT EQUAL situations can all be tested by *Viva* quite happily.

MATH:



Probably the weakest part of *Viva*, but then again it's not supposed to do number crunching. CONSTANTs and VARIABLEs can be used, and various operations can be performed on them: ADD, SUBTRACT, MULTIPLY, DIVIDE, SQUARE, INC, DEC, MODULUS. RANDOM numbers are also availabl, which could come in handy.

SYS:



Setting up the story. Different COLORS (the USA makes its presence felt, doesn't it?) can be chosen, and NEWSCREEN can select different picture configurations. Finally, the powerful CHAIN command can be used. This clears the present *Viva* story out of memory, and loads and runs a new one. Which means (in theory) that, by using different modules and making sure there's a path between them – which is what interactive/multi/hyper media is all about – *Viva* stories can be as big as you want. No limits folks?

Limitations

Not many of these at all. The well worn route of Amiga animation routines (.ANIM files) are supported, but the manual only tells you how to go to an animation creator, not how to include ANIM files in your story. I was relieved to find the feature there. Overlaying computer animation on top of real world moving images is a powerful facility indeed, and for a while I thought I'd have to moan.

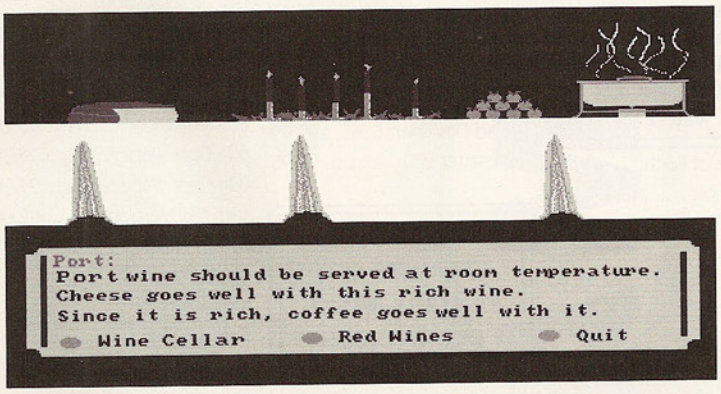
Also, some of the Input/Output routines work too slowly when you're using computer graphics with lots of colours. Speech is especially limited, with a maximum of 8 onscreen colours available to retain the feature.

The style that the 263-page manual was written in is a little heavy. Who would say "It is said that when teaching concepts, you should always use graphics?" Human beings say "A picture tells a thousand words".

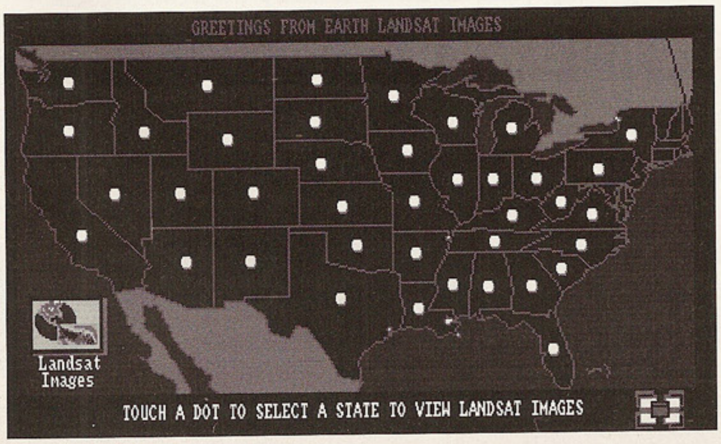
Apart from the excessive price of £299.95, that's all I've got to say about the program that's bad.

Good Points

Something else to remember is that programming with icons is different to actually physically writing programs using script. It takes time to learn but if you're used to it then it's much faster. *Viva* supports keys for selecting icons, which does speed up the process some more.



LEFT: The wine advice program in its final stages, showing the kind of graphics-and-text interface that makes it simple and friendly for the user.



LEFT: Another *Viva* application, this time intended to help the user browse satellite images. The graphic interface makes the choice of information much, much easier.

For program debugging, you can print out a simple script version of the program. A program is much easier to debug from a text desciption than ploughing through hundreds of icons pasted onto a storyboard.

Therefore from the programming point of view *Viva* can quickly lay out your ideas and get something visible, but getting all the bugs out is just as tedious a job as ever. Development time is still speeded up though, and by having a graphical (maybe iconical is a better word) view of the program debugging is perhaps a little easier.

The manual is extremely thorough in its approach. It really does teach you how to use the program step by step. If you've never programmed you'll find it slow at first, but anybody with a passing familiarity to the ideas (start, process, make decision, action, finish) will be able to use *Viva* within a short time.

As well as being thorough, the manual does contain a lot of relevant information for the *Viva* user. Names and addresses of companies and products are listed (those who supply video digitizers, sound samplers and so on). They're all American though, so it would be worthwhile to see if the same or similar products are available over on this side of the pond. The glossary is pretty informative too: interactive media is laced with jargon like CAV, CBT, CLV and ADPCM are a few of the strange concepts explained in English.

Verdict

If you are serious about programming interactive video on your Amiga and are in a position to spend lots of dosh, splash some on this. It really is easy to use. Mixing graphics, sound and getting user participation is exactly what *Viva* thrives on.

If and when CDTV finally becomes available, I can see a lot of people going for *Viva* to develop laserware for it. It needs a lot of hardware, software and effort to get really spectacular effects, but the potential of this program is vast.

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VIVA PROFESSIONAL

There will also be an updated version of *Viva*, going by the name of *Viva Professional*. As well as all the features mentioned here, it will also have file keeping (for swapping variables between different stories) and a built in expert system/text data handler. Expect to see it around Christmas, as Michtron are pretty confident that it will be finished by then.



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Last year a lucky reader got the chance to load up a trolley full of goodies at the Computer Shopper Show. It was so popular that we've decided to do it again this year, so that another winner can charge round the show grabbing gear off loads of stands and piling it up high in a shopping trolley.

The winner will have five minutes to race around getting a couple of items off the stand of each participating exhibitor. Three runners-up will also receive a pair of tickets to the show. Once again we want you to demonstrate your bargain hunting ability by looking through the pages of this issue of Amiga Format to track down the best prices on the following list of products:

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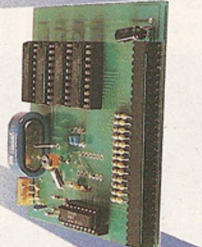
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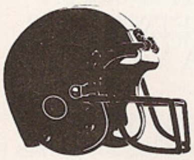
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THE
Midnight Oil

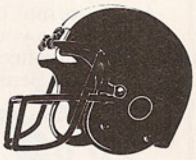
OUR PRIORITY : GAMEPLAY

"From my point of view, the game has kept me sitting up at nights and through holidays and weekends for up to 12 hours at a stretch, with minuscule breaks for food and other necessities. .... It is a game I have no hesitation in recommending to anyone with even the slightest interest in American Football.

ATARI USER REVIEW



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Headcoach is the complete American Football simulation. You take charge of the latest recruit to the National Football League, and through skillful design of gameplans and the use of the college draft, build up a 45 man squad to keep your fans happy and win the Superbowl. Unlimited seasons, and aging players, produce a realistic game of fluctuating fortunes.

THE MATCH
The match is a game in itself taking about 40 minutes to complete. With 26 offensive plays and 21 defensive plays, there is ample scope to match your gameplan to the skills of your squad, and exploit the weaknesses of your opposition. It's here where the strengths and weaknesses of your own players are highlighted.

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TRAINING CAMP
Here is an opportunity to assess your players before they take the field. The appropriate coach will give you his view of the current form of any of the players and how they are performing in training. The current sharpness of any player can be assessed from their time in the 40 yard dash. Wide receivers, cornerbacks, running backs and linebackers are all positions where speed off the mark is crucial.

Available direct from:

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VISA

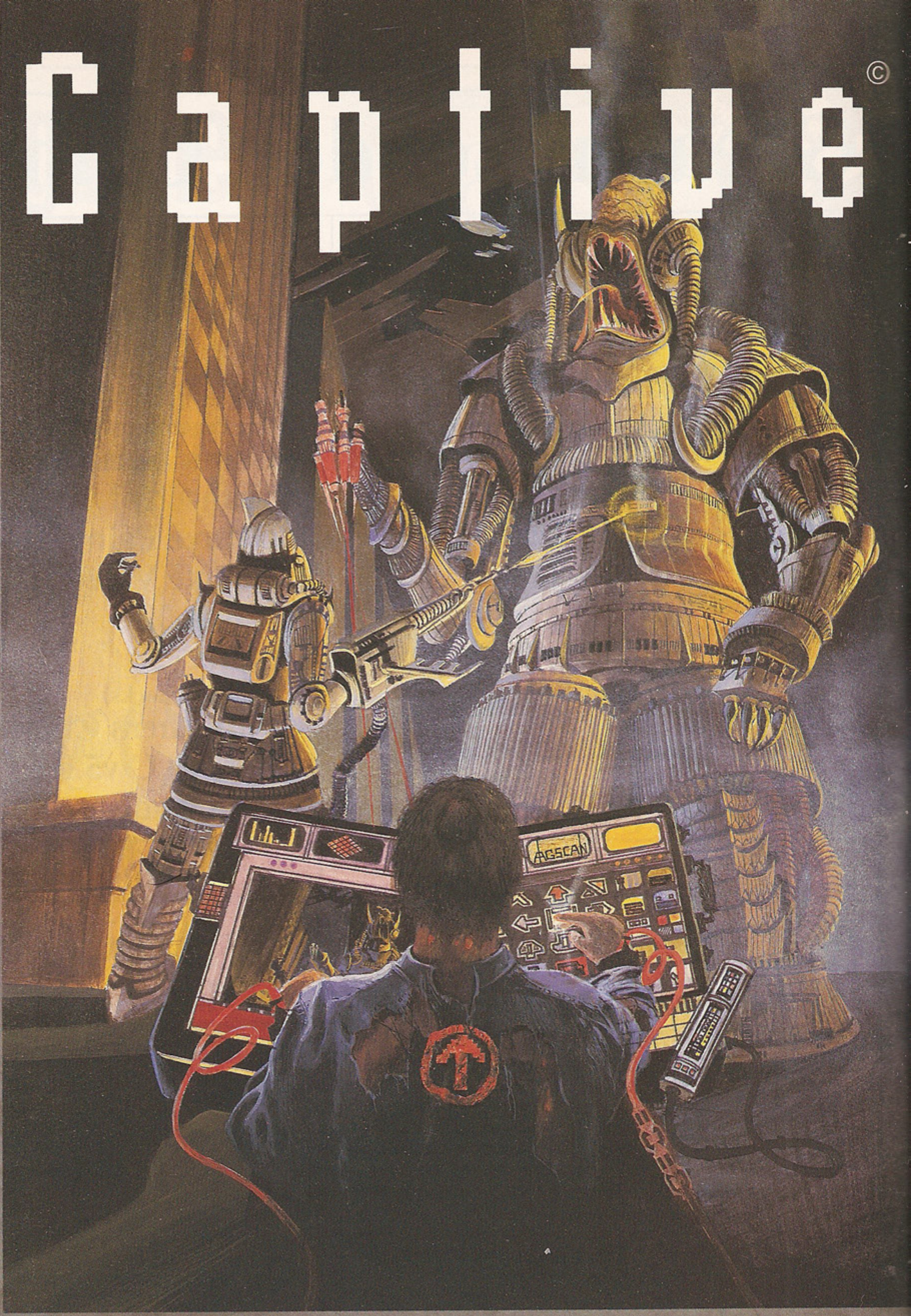
Access

0438
721936

COLLEGE DRAFT
During the 16 match season, plus whatever playoff matches you achieve, you will find yourself praying for a second classy running back or wide receiver, or need to beef up your offensive line (too many sacks). There can be many weaknesses. The college draft should be used to find those stars of the future and make sure that they're playing for you.

STATISTICS
The statistics section will encapsulate your team's, and your player's, season. Total yards, rushing yards, passing yards, kick-off returns, punt returns (and averages for all these), interceptions, sacks .... all these are kept for each match, the whole season, for the team, and for each player. MVP votes are accumulated for the season. American Football is a game of stats and this simulation sustains that.

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MINDSCAPE INTERNATIONAL



Actual screen shots

M I N D S C A P E

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GAME Busters

Some of you may be reading your copy of Amiga Format at the CES. So you've wandered around buying a veritable fistful of games and are looking forward to playing them to death. But you won't be able to get anywhere without **MAFF EVANS** and his amazing dancing clothes horse. No, no I mean Gamebusters. Yeah, that's it.

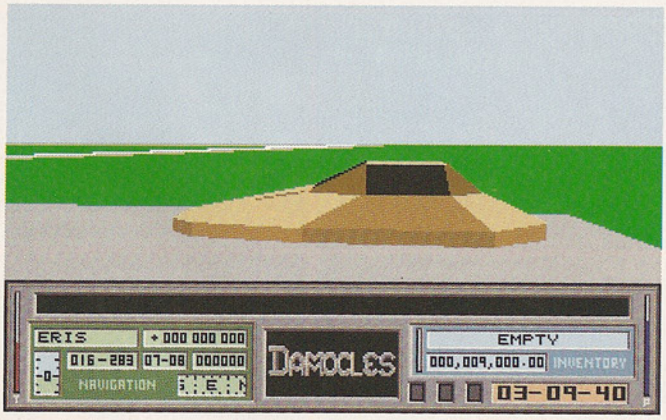
DAMOCLES

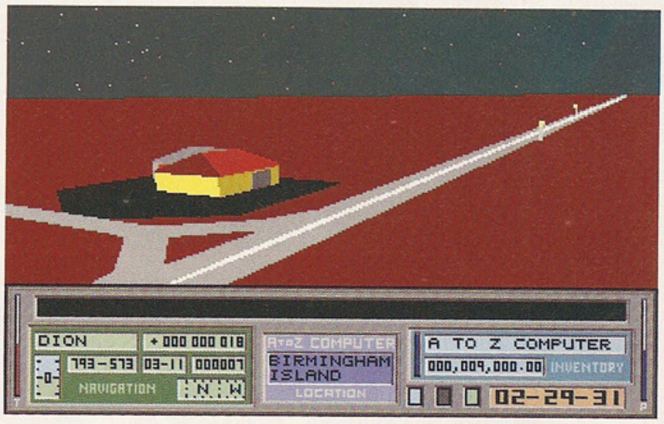
Chaos! Mayhem! Destruction! Death! Wuuaaarrgh! Hold on... calm down a bit... that's better. Anyone out there attempting to save Eris from destruction by the mighty comet Damocles, fear not! Just have a shuftie at these nice tips to help you through.

Whatever mission you decide to follow, there are some things you absolutely have to do to begin with to get anywhere.

Once you have landed on Eris, head for the Spaceport building and go in to pick up the key to the VIP Limo. Follow the instructions that Benson gives you until you reach the State President's humble abode. Take the lift to the second floor and go through the red door at the end of the corridor into the State President's office.

At first he will offer you 100,000-00 IGCs to destroy the comet, but if you hold out for long enough he will push his offer up to 250,000-00. Accept this amount when asked then go back to the lift and head for the basement. Take the key to the Eagle 9SE and go back out to your limo. Take the road opposite to the Morby School of Flying. Once there leave the limo, dumping its key, and board the Eagle craft.





THE NOVA BOMB SOLUTION

Fly to the Eris Post Office on Snow Island, which is found at coordinates 007-507, 03-00. Enter the building and go through the door on the right. There you will find a cupboard, which is actually Nova Trigger #2. Pick it up and leave the building, flying your ship back to Capital City.

Find the elevator at coordinates (017-281, 09-02) and go down to the basement to pick up the Anti-Grav. Get back to your ship and fly to another elevator in sector 11-08. Once there, leave your ship and pick it up (no, I'm not crazy... that's what the Anti-Grav is for).

Go down the lift to the basement where you will find Transporter #5. Step through to warp to Transporter #3. Once there, take the lift down to the ground floor and go outside. Drop your ship and board it quickly, otherwise you will suffocate. Now you will be on Metis (Eris' red moon).

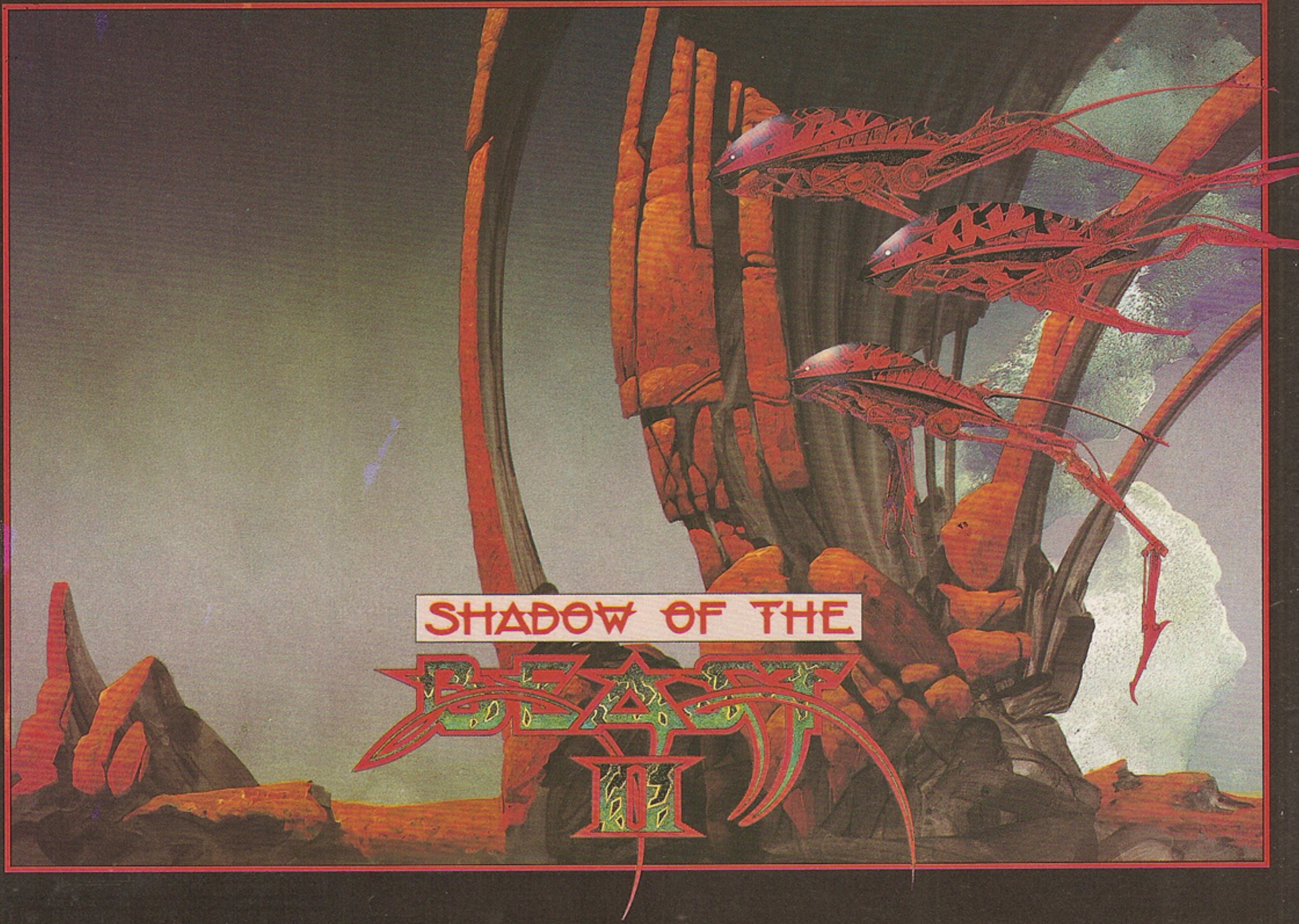
Fly to the Nixon Interstellar Court of Justice at sector 05-06 and and land as close the doors as you possibly can. Leave your ship and quickly walk through the doors. Once inside walk towards the table. As you reach the table, the wall behind it should start to open to reveal a secret room. Enter the room to find a washbasin, which is in fact Nova Trigger #4. Collect it, leave the building and board your ship.

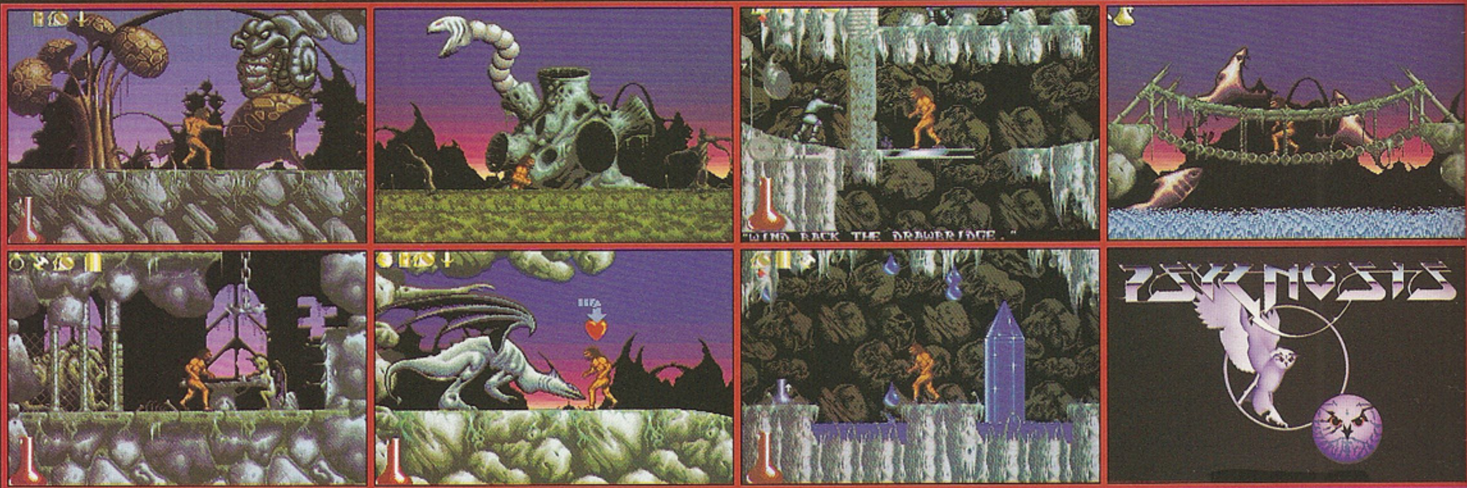
Fly west back to 05-06 and land. Pick up your ship and enter the elevator, taking it up to the ninth floor. Use the Transporter to get to Transporter #0. Leave the room you are in and go through the door on the left. Here there should be a sideboard, which is Nova Trigger #1. Pick it up, leave the room and make your way back to the Transporter.

Now warp to Transporter #6 which should get you to Gaea (coordinates 064-439, 08-08). Enter the lift and go down to the ground floor. Once you are outside, drop your ship and fly it to sector 05-06 and enter the building. Once inside, take the elevator to the ground floor and go through the doors in front of you. Take the bar of gold found there and leave the building.

Board your ship and fly to the Trading Post at coordinates 04-06. Sell the gold for 45,000-00 then fly your ship to Mega Trading at 05-06. Enter the building and follow the doors round to the trading room, where you will find Nova Trigger #3 disguised as a Hi-Fi. Pick up the Hi-Fi and get back to your ship.

Fly to UR City (the green island) and head for coordinates 264-326, 09-02. Land by the ele-





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You must fight your way through many enemy-infested levels collecting and using weapons and objects to aid your crusade towards confict with the Beast Mage . . . before he makes your sister his own!

Screen Shots from the Amiga version

SEEING IS BELIEVING

vator in that sector and go down to the basement. There should be a black and white thing there. This is the Nova Bomb itself. Pick it up and get back to your ship.

Take off, flying away from the planet's surface, and stop a second or two after you've left the atmosphere. Turn around so that Dalais is in the centre of your screen. If you look closely, you should be able to spot the planet Icarus to the left of Dalais. Fly straight towards it and land on the surface. If, at this point, you have less than one hour and 30 minutes left, then you must fly and land on Damocles before it hits Eris, if you have longer then stay on the surface of Icarus.

Drop the Nova Bomb and fly away so that either Icarus or Damocles takes up about a third of the screen. Go through your inventory, switching the Nova Triggers on. This is done by hitting 'enter' when the trigger is in the inventory window, then pressing '+' to turn them on. When the last trigger is powered up, either Icarus will explode, sending the comet spinning away safely, or Damocles itself will be destroyed – depending on where the bomb was planted.

TRANSPORTERS

Travelling through space in the normal way gobbles up your time rapidly (have a chat to Albert Einstein about this one), so use of the transporters is essential. Here is where to find those magic boxes:

TRANSPORTER	PLANET OR MOON/ ISLAND OR BASE	PLANET OR MOON COORDS	CITY COORDS	FLOOR
0	Gaea/UR City	125-687	07-01	–
1	Eris/Bare Island	750-375	06-02	G
2	Dion/Birmingham Island	793-574	03-14	1
3	Metis	616-511	00-06	9
4	Vesta/Politburo City	264-326	04-06	B
5	Eris/Capital City	017-283	11-08	B
6	Gaea/Chaldea Metropolis	064-439	08-08	1
7	Logos	316-896	04-02	4
8	Bacchus/Bacchus Waystation	405-638	02-08	–
9	Mentor/Mentor Waystation	689-316	09-07	–

If you're having trouble finding the door keys that you need, then just follow this simple advice. All you need is some explosive and a timed detonator (get a grown-up to help you out with this one, kids – you know dangerous these explosivey things are). Set the timer to about 20 seconds and the power to three. Now stand in front of the door, select the explosive and press '*'. Drop the explosive and run away quick. You shouldn't need to fly too far, but it's better to be safe than sorry, as Karl Marx would say.

That's all for you *Damocles* fans for now, but just watch out! There will be more instalments to this thrilling story soon in a future issue of the one and only Gamebusters! Stay tuned for this word – you have been warned.

Stuart Nicholls, Fareham, Hampshire

There were far too many letters sent in with *Damocles* tips to mention all the individual names, but a big thanks to everyone who bothered to send them!

DOORS

KEY	PLANET OR MOON/ISLAND OR BASE	PLANET OR MOON COORDS	CITY COORDS	FLOOR
B	Eris/Bare Island	750-375	06-05	B
C	Metis	617-510	01-03	G
D	Dion/Dion East	810-566	06-00	–
E	Dion/Birmingham Island	793-571	03-14	9
F	Eris/Capital City	018-284	15-12	2

VEHICLES

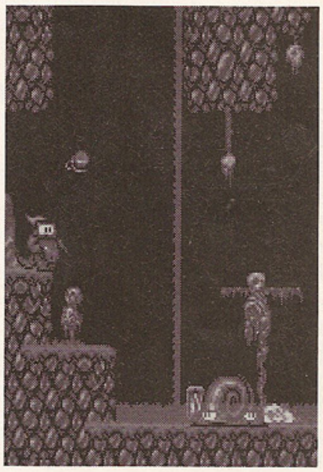
KEY FOR	PLANET OR MOON/ ISLAND OR BASE	PLANET OR MOON COORDS	CITY COORDS	FLOOR
99 Chevy	Eris/Bare Island	750-375	06-02	–
22 CV	Gaea/Chaldea Metropolis	063-439	08-08	1
Best cup...	Eris/Capital City	017-284	08-14	–
Bullet	Pan/Pan Hades Labour Camp	103-689	04-01	1
Concord III	Mentor/Mentor Waystation	689-316	09-07	–
Eagle 9SE	Eris/Capital City	017-283	09-08	B
Targ Tourer	Vesta/Politburo City	264-326	04-06	1
VIP Limo	Vesta/Politburo City	016-283	07-08	–

Some vehicles are at the same place as the keys, but most are to be found in locations other than those of the relevant keys:

VEHICLE	PLANET OR MOON/ ISLAND OR BASE	PLANET OR MOON COORDS	CITY COORDS	FLOOR
99 Chevy	Gaea/UR City	125-687	07-01	–
Bullet	Thalia/Thalia Base Camp	489-044	06-03	–
Concord III	Bacchus/Bacchus Waystation	405-638	02-08	–
Eagle 9SE	Eris/Capital City	017-283	09-08	1
Targ Tourer	Dion/Birmingham Island	793-574	03-14	–
VIP Limo	Eris/Capital City	017-283	07-07	–

FLOOD

Poor old Quiffy. Gets out of one scrape into another only to get splatted by a psycho-teddy. Well now you cn relieve that headache tension with new improved *Flood* codes! No need to scrabble around looking for those question marks, here they are, ready sussed for you:



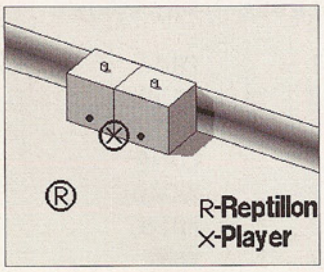
LEVEL	PASSWORD
1	FROG
2	YEAR
3	QUIF
4	LONG
5	WORD
6	FRED
7	WINE
8	GRIP
9	TRAP
11	FRAK
12	VINE
13	JUMP
14	NILL
15	FOUR
16	GRIT
17	ZING
18	JING
19	LIDO

20	POOL
21	HATE
22	REED
23	LIME
24	QUID
25	WING
26	FLEE
27	GIGA
28	HEAD
29	LOOP
30	SING
31	JOUX
32	PINK
33	GOGO
34	LETS
35	QUAD
36	BRIL
37	EGGS
38	HENS
39	NAIL
40	SOAP
41	FOAM
42	MEEK

ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS

Having trouble with that big metal b... er... horrid, nasty thing at the end of the level? Well here is a method I really like: running away quickly without fighting it! Here's how to do it.

Choose a one player game (the cheat will not work in two player mode) and play the level as you usually would. When you reach the Reptillon, run past the robot to get to the doors and stand at the position marked X on the diagram that follows.



Once you are here, press the bomb key and waggle the joystick left and right. Keep dropping bombs and pushing against the door in this fashion and you will squeeze through the thin gap. This will work for all the Reptillon stages. Ah... follow that great old Monty Python and the Holy Grail adage... RUN AWAAAY!

Richard Jenkins,
Great Barr, Birmingham

NEUROMANCER



Life is tough when you're down on your luck in Chiba City. No money, no Cyberdeck and no ROM Constructs to help you. Well here's a friend to guide you through the city's perils:

First up, go to Shin's to pick up your UXB deck (dodgy as it is), then go to the Gentleman Loser and hack into Cheap Hotel's database. Edit the bill so that you don't owe them any money and order the caviar from room service. Now edit the bill again to cancel the cost.

Pick up your order from the Cheap Hotel itself and then make your way to Crazy Edo's. Give him the caviar and he will give you Comlink 2.0 in return. The rest of the Comlinks are scattered around various databases, so you will have to find them by doing the jacking yourself.

As soon as you get chance, hack into Hosaka and put yourself on the payroll, then go and pick your check up from the building in the high-tech zone.

Open an account with the Bank of Zurich, then use the link code to hack into Bank Gemeinschaft and transfer the $30,000 to your Zurich account.

Buy yourself a Cyberspace deck (a Shogun is pretty nifty little number). Going into Crazy Edo's and calling him a gnat's eyeball is a way of getting it cheap.

Before jacking into Cyberspace, make sure you have Logic, Phenomenology, Psychoanalysis and Philosophy skills from Julius Deane fitted and use them to combat the AIs.

Ask Finn at Metro about the Holy Joystick, buy it from him and take it to the monks at the House of Pong. In return he will give you Zen and Sophistry chips.

Get Larry Moe arrested by editing a Tactical Police warrant (you can get his BAMA ID number from FUJI). You can now go past where Larry used to be and buy a Sense/Net Pass from Lupus. Now go to Sense/Net, use the pass and enter the ROM Construct code to get the Construct.

Go to see Emperor Norton at the Matrix Restaurant (Shiva at the Gentleman Loser will give you the pass you need to get in) and buy all his skills and upgrades.

Go to the Cheap Hotel and jack into Cyberspace to practice ICE Breaking (always use the ICE Breaking chip first). Various breaking software is available from Finn, but Blowtorch, Drill and Probe are essential. If you can, use a variety of software, as it is much more effective against ICE. The best software to use overall is definitely Depthcharge, Concrete and Logicbomb.

To complete the game, you need to destroy all the AIs. This gets a bit complex when you get to Greystoke, as you need Hemlock 1.0 to destroy him.

One very useful point to remember is that Kuang Eleven 1.0 is specially designed to kill off Neuromancer.

Ben Davis,
Dranfield, Sheffield

LINK CODE	*DATABASE*	*PASSWORD*
CHEAPO	CHEAP HOTEL	COCKROACH
REGFELLOW	REGULAR FELLOWS	VISITOR
CONSUMEREV	CONSUMER REVIEW	REVIEW
ASANOCOMP	ASANO COMPUTING	VENDOR
WORLDCHESS	WORLD CHESS	MEMBER
CHAOS	PANTHER MODERNS	MAINLINE
BOZOBANK	BANK OF ZURICH	Can only be accessed with Sequencer 1.0
HOSAKACORP	HOSAKA CORPORATION	FUNGEKI
SOFTEN	SEA	PERMAFROST
FUJI	FUJI ELECTRIC	UCHIKATSU
KEISATSU	TACTICAL POLICE	SUPERTAC
HITACHIBIO	HITACHI BIOTECH	BIOTECH
MUSABORIND	MUSABOR INDUSTRIES	SUBARU
LOSER	GENTLEMAN LOSER	LOSER
EASTSEABOD	ESFA	LONG ISLAND
BANKGEMEIN	BANK GEMEINSCHAFT	VERBOTEN
VOYAGER	NASA	APOLLO
YAKUZA	YAKUZA	YAK

ADDITIONAL TIPS

BG1066 is the code which will get you past the security system at the Gemeinschaft bank.
Comlink 6.0 can be downloaded from Yakuza.
The account number to siphon funds out of Gemeinschaft is *646328356481*.
The fund number for Bank of Berne is *121519831200*.
The ROM Construct code is *0467839*.

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BYTE NUMBERVALUE ACTION

MISSIONS

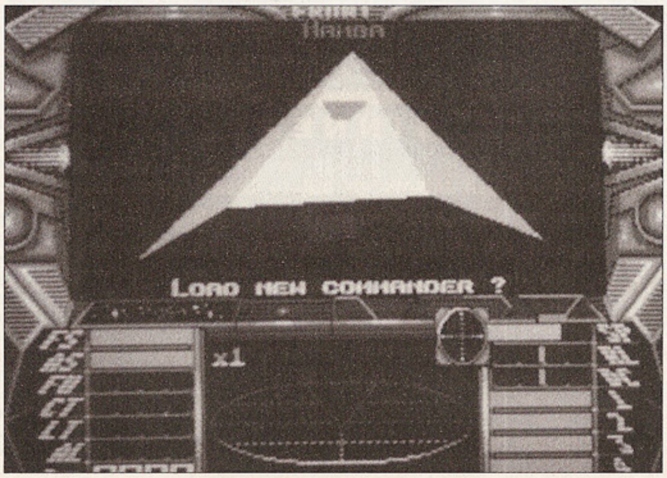
BYTE NUMBER	VALUE	ACTION
A3	01	
	r01	Find and destroy Constrictor
	r02	Find Thargoid Documents
	r03	Rescue Refugees
	r04	Destroy Cougar
	r05	Destroy Thargoid Station
12	00-FF	Create New Galaxy
13	00-FF	Create New Galaxy
18	FF	Credits
1F	46	7 Light years Fuel
23	02	Large Cargo Bay
24	01	ECM
26	01	Pulse Laser
2C	01	Escape Pod
2F	01	Energy Bomb
32	01	Docking Computer
34	03	Galactic Hyperdrive
36	01	Mining Laser
38	01	Military Laser
3F	01	Cloaking Device
40	01	Food
47	01	Textile
49	01	Radioactive Materials
4C	01	Slaves
50	01	Wine
54	01	Drugs
5C	01	Computers
63	01	Machinery
67	01	Alloys
69	01	Weapons
6C	01	Furs
72	01	Minerals
75	01	Gold
79	01	Platinum
88	01	Refugees
8C	01	Thargoid Documents
97	00	Clean Status
97	08	Elite Status

Patrick Putteman,
Brussels, Belgium

ELITE

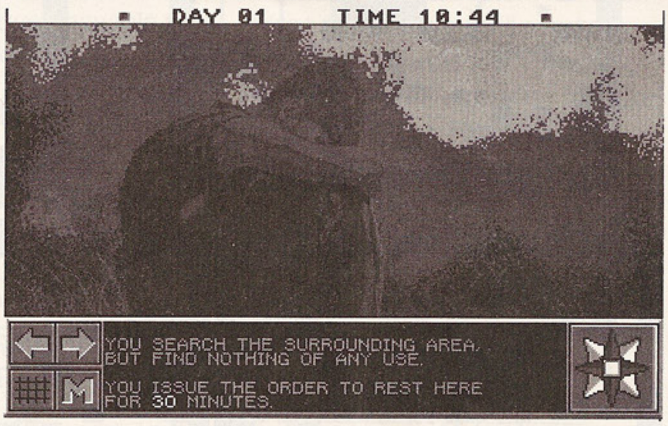
An old game, I know, but it's still a classic and people have been clamouring desperately down the phone for the cheat codes, so by popular request here they are.

To get into the hack screen, enter the name SARA when you are asked for the code from the book. You will then be told that this is wrong and will be asked to enter another code. Do so and get into the game. Now pressing the * key will present you with the cheat screen, on which you can change values to have a dramatic effect on the game:



LOST PATROL





Charlie's in the light! Get those Claymores up! Incoming! Aaargh! Sorry. I seem to be getting a bit carried away today. Ahem.

Keeping up your men's strength and morale is vital. Giving your men 50 minutes' rest at night, or during the day when it's too dark to carry on, will slam your energy and morale levels to maximum. Even if you don't have much food, you don't need to worry, as your men will not eat it.

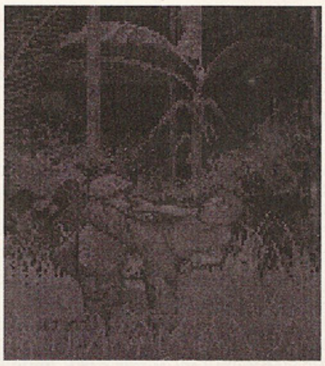
On reaching the first village (the first white cross on the map), search the area to find a hole in the ground where the villagers appear to be hiding. You then have two options: ENTER TUNNEL or USE GRENADES. Gomez is useful at this point, but if he is dead, go for the USE GRENADES option.

Start off questioning the villages normally, by asking them "Where VC?" Once you have an answer, start the hard questioning by saying "Get food". Don't spend too much time with questioning, or a village boy will get hold of a gun and shoot one of your men.

Got to go...the pick-up chopper's arrived.

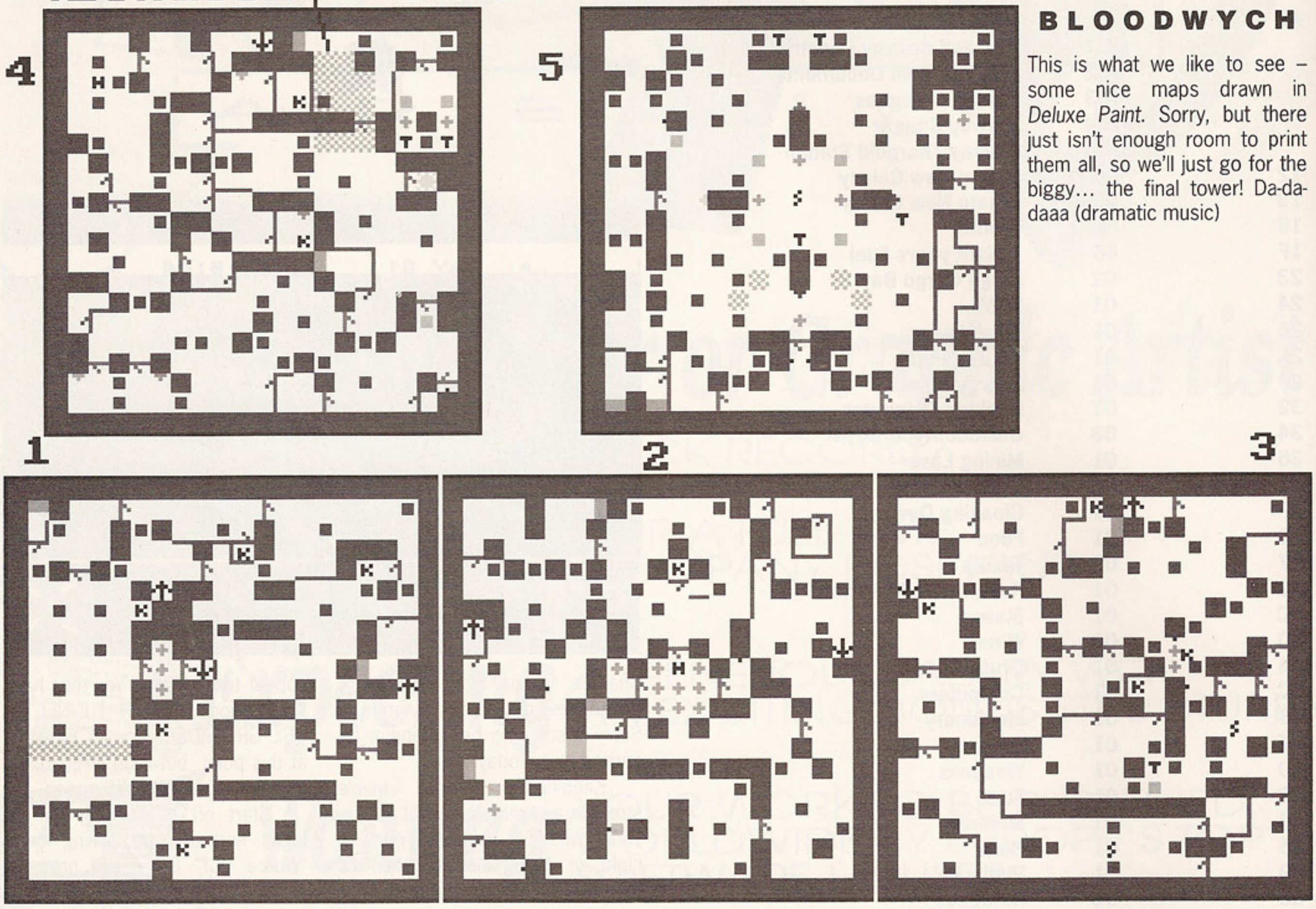
Mark Pearce,
Pitsea, Essex







The Final Tower (Zendick's lair)



BLOODWYCH

This is what we like to see – some nice maps drawn in *Deluxe Paint*. Sorry, but there just isn't enough room to print them all, so we'll just go for the biggy... the final tower! Da-da-daaa (dramatic music)

SOME GENERAL HINTS

If you are still unable to get to the last level, then you may need a few tips to get you started off, so here goes...

If you're patient enough, then a good way of starting is to recruit your way through all of the *Bloodwych* characters taking their belongings, then dismissing them. You can now sell all the weapons you don't want, to end up with about 200 coinage. You will also have a plentiful supply of food and keys, so remember to have only one character carrying the keys to save on backpack space.

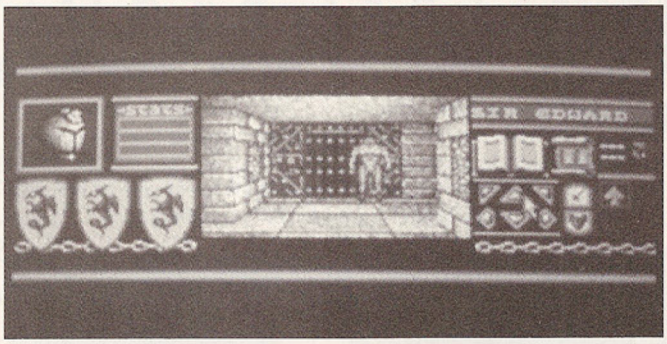
Usually, the best combination of characters is to have two fighters at the front and two wizards at the back. It's difficult to say which colours are the best, since they all have spells which come in useful fairly often. The yellow Vivify spell is probably the best, but red spells such as Vitalise, Fireball and Firebath tend to be the most frequently used. Note that the first time you use the Vivify spell, you will need about 70 or 80 spell points if the character casting the spell isn't yellow.

Any items you come across can be sold to any creature, so long as they're not one of the characters you robbed at the beginning of the game. You can quite easily reach and maintain the maximum of 99 coinage this way.

As far as fighting goes, make sure you don't get trapped while using the 'hack and step back' method, only to realise that you haven't saved the game for some time. Occasionally it is possible to worm your way out of this situation by using the Confuse and Terror spells and talking to the creature. Keep boasting to it about how great you are and then threaten it. Every now and then the creature will turn and run, but unfortunately this is quite rare.

A tip which is used by quite a large number of *Bloodwych* players is the old 'hiding behind the door' technique. Stand to one side of a wooden door with a creature on the other side and keep clicking on the fight icon until the creature opens the door. Sometimes it is possible to get a hit in from both of your front characters and close the door before the creature hits you. If the creature then opens the door straight away, you won't need to click on the fight icon again.If, however, there is a delay, then you'll probably have to keep hitting it. If you're worried that one of your characters is going to die, then lock the door using Magelock, as it's quite easy to make the mistake of locking the door open if you use a key. With the door locked you can give your characters a rest, allowing them to recuperate and be ready for the next fight.

Timothy Bridle,
Fleet, Hampshire.



WINNERS

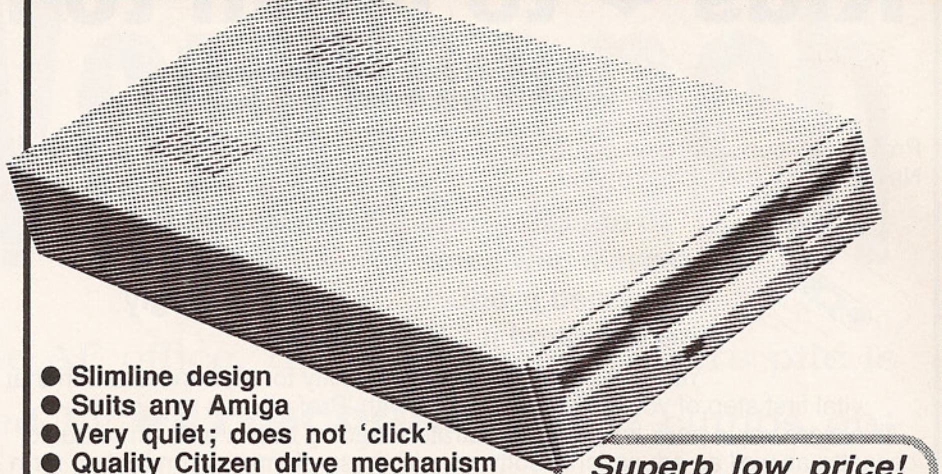
This month's dosh tickets go out to Stuart Nicholls for the *Damocles* tips (oh, and by the way, if we print some more next month, they still count as the same tips – you can only win once, Stu!), Timothy Bridle for the *Bloodwych* maps and Ben Davis for his incredibly helpful *Neuromancer* hints.

We still want to see more *DPaint*-drawn maps, but they're very few and far between as yet. So come on, you pixel artists, get drawing and send them to GAMEBUSTERS, Amiga Format, 30 Monmouth Street, Bath BA1 2BW.

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Workbench

In the AF office, the Workbench letters pile is stirred by PAT MCDONALD. He climbs out of it and dons the techies' cap, the symbol of those who try to sort out those irritating little Amiga problems...

DODGY DISPLAYS

We have recently come across a serious problem associated with a certain make of monitor. There are presently around 15,000 of them in circulation. They are Electrohome 38_D04502 and 38_D04501 monitors, from V1 to V3. Note that only the RGB types are affected, not the composite input variety.

Most of them have been 'converted' to operate as direct drive analog RGB monitors, but from a number of repairs we have carried out (and after consulting with the original manufacturer) we feel users ought to be aware of the following problem.

No protection is present at all should the tube 'flash over', the signals from the computer being fed directly to it. Three Amiga's, two STs and a Beeb have come in to us with either faulty video buffers or associated circuitry.

If it will help at all, we will on receipt of a SAE send the details of an adequate protection circuit which we now use as standard. There is no charge for this information, the circuit being simple to construct.

N Campbell
Creetown Electronics,
Bridgeview, The Hollow,
Creetown, Newton Stewart,
DG8 7HZ.

COMMODORE CLASH

I have an A500, A501 memory upgrade and two external drives. Should my power supply be able to cope with that lot? I am thinking of buying the A590 with 40 meg hard drive and 2 megs of RAM. Will it clash with my A501? Is there an official Commodore offering which gives more memory than the A501? Why did Commodore close their user helpline?

P Ebbans
Walsall

Yes, your power supply should be able to cope. The A590 should go fine with the A501. No there isn't an official Commodore offering yet, but there are plenty of very good alternatives. I presume that they closed their helpline because they weren't that bothered about answering questions on their products. Especially the difficult ones, which I'm sure they would much prefer to leave for us to answer for you.

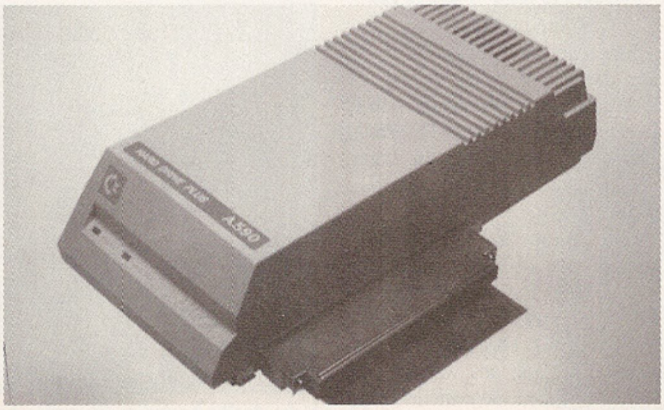
PORT QUERY

I've recently started a GCSE Technology project and have decided to make a computer interface. This interface will be able to control the power supply of various electrical devices by using relays to turn them on or off. The operating software shall change the value of the memory locations at which the pins of the port are situated. I have a few questions to help sort me out:

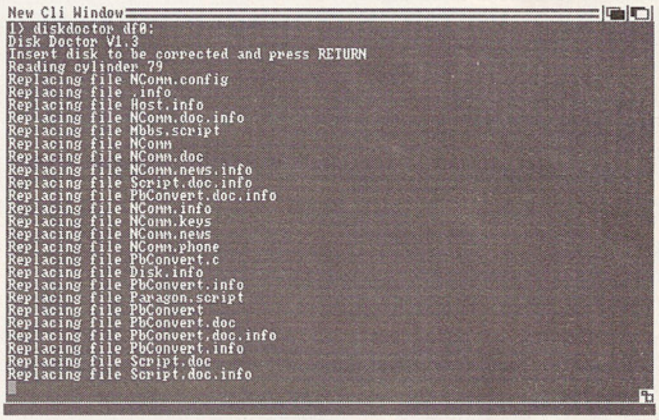
1) Which port is the best one to use (I'm only outputting data).
2) What are the memory locations of all the pins for the aforementioned port?
3) I am considering using *Amos* for the operating software, is this a good idea?

Seth Yates
Basildon

As you just want to output data, I'd recommend that you use the printer port. The pin outs for this are in your Amiga manual on page F7. Don't bother with memory locations: just send out regular to the printer, ie in AmigaBASIC use LPRINT. As for Amos, I really wouldn't bother using it for this purpose because AmigaBasic is well up to the task and examiners aren't really interested in pretty solutions to projects.



COMMODORE CLASH: The A-590 Hard Drive – A501 compatible?



FINAL CUT: Diskdoctor just loves sorting out your corrupted disks, whether they're just playing up or totally wrecked.

FINAL CUT

I was commissioned to do an Air Project for my school work. I had written the last word and saved it when a prompter came up, telling me my file had a Read/Write error. After ten weeks of work I was thoroughly P****d Off! My file won't load so I can't print it out. What is a Read/Write error? How can I get rid of it? Can I get my file back?

Joe Pietroni
London

Read/Write errors occur when a disk becomes partly corrupted. This can happen for various reasons: too much heat, stray magnetic fields, close lightning strikes or just plain old Act of God. There is an easy way to fix it. Boot up your Workbench disk, go into the CLI and type DISKDOCTOR. Bung in your corrupted disk when requested, and press RETURN. The program will try and sort out your disk as best it can, and for your problem it should cope OK.

After it's finished, it will recommend that you copy all the files to another disk. If you keep getting Read/Write errors with tha particular disk, then it's a permanent problem and after copying as much as you can onto another disk, I suggest you throw the disk in the bin.

WHERE DO I GO?

My disk drive doesn't work very well on some games, notably *Cyberball*. I've tried lots of different copies (originals that is) and it still won't load. Also, when using a

coverdisk from another magazine it comes up with:

Systems Request
Error Validating Disk
Key 970 already set.

What does it mean? Is it curable?

Richard Cameron
Bath

We recently had an Amiga with floppy drive problems and I took it down to Software Plus, the local computer shop. They sorted it out in about ten minutes. The problem could well be related to a protection system that tries to push the floppy drive beyond its specifications (used to be a fairly common problem).

If anybody elsewhere has similar problems, use the Yellow Pages and call round your local computer shops asking for help. Make sure when you phone that they can do it on the spot, rather than sending it away.

As for a coverdisk not working from another magazine, I'm afraid we couldn't tell you what's wrong without knowing a lot more about the problem and I suggest you take it up with the magazine concerned.

SOUND COMMENT

Two brief questions: can *Deluxe Music* import samples from outside sources, like those on the AF 12 coverdisk? Also, one of the Abacus books says that by putting random values to Paula, it can produce white noise. When I try it all I get are some very rich tones, why is this?

Tim Stevens
Basingstoke

Yes it can cope with multi-octave samples. As for creating the sound of static (why? They never tell me why) you need to keep outputting random values to Paula to get white noise: white noise has no set value and therefore is a series of random sounds, switched very quickly.

PRICE OF POWER

After buying all the necessary upgrades I am considering getting a hard disk. The prices of the things, why are they so expensive? Could you tell me how to make an interface for one of the readily available (and cheap) PC hard drives? I know it's a bit much, but if it's possible I'd be only too glad to knock it together myself. Also, is there a thru port adaptor for the A500 which will let me use my Datel Action Replay Cartridge with a hard drive?

Craig Smith
Camberley

Off hand, no. Maybe there are some bits and bobs available from a source – I must admit I haven't heard of anything that makes hard drives any cheaper.

But, this is a good point to announce a forthcoming feature to Amiga Format. All you hardware freaks, start sending in your projects for DIY hard drives, samplers, digitizers, widgets and gadgets to me, and I'll try to tell the world how to make their own hardware. Which is the cheapest way to do anything in the computer world.

HOW FAT IS MY AGNUS?

I have an Amstrad DMP1 printer connected to my Amiga. It can't produce graphics at all well. Can you recommend a good driver for it? Also, how do I get 1 meg of chip RAM?

D Lewis
Maidstone

Ermm, the DMP1 printer must be one of the naffest about for printing graphics. I honestly haven't got a clue where you're going to get a printer driver for it: can any readers help?

You want one meg of chip RAM? Read on...

My Amiga A500 is fitted with the new fatter Agnus. I have 2 megs of memory and I would like to know how to get more chip memory, I understand that it's a simple matter of a bit of soldering inside the computer.

Dennis Trowbridge
Gloucester

Read on...

HOW TO GET 1 MEG OF CHIP RAM

A few notes first. For a start, all this does is to make 1 meg of RAM available to the Agnus, Paula, Denise and Gary chips. Programs like *Deluxe Paint III* and the *Sonix* sound sampler can both make use of this.

Of course, you must have at least 1 meg of RAM available on your A500. Right, now the disclaimer and on to the procedure...

WARNING: Following this installation will void any warranty on your computer. The modification should only be carried out by a qualified technician or gifted hobbyist. Amiga Format magazine and myself (Andy James) disclaim any responsibility for damage caused by performing this modification.

1) Run the *Vectacheck* program on this month's coverdisk to make sure that you do indeed have a fatter Agnus chip with an Enhanced Chip Set (ECS).

2) Unscrew the two halves of your A500. Remove the top cover, and the keyboard. Unscrew the metal shield and remove it.

3) Check that the chip in socket U2 is P/N 318069-02.

4) Cut the track between the bottom two solder pads of jumper JP7A. This is situated bottom right, next to the memory expansion bus.

5) Cut the track between the bottom two solder pads of jumper JP2. This is sited at the top left corner of the Kickstart ROM chip next to the 68000 CPU chip.

6) Now solder the top two solder pads with a solder bridge of jumper JP2.

7) Replace the shield and keyboard, put the top cover back on and screw it together.

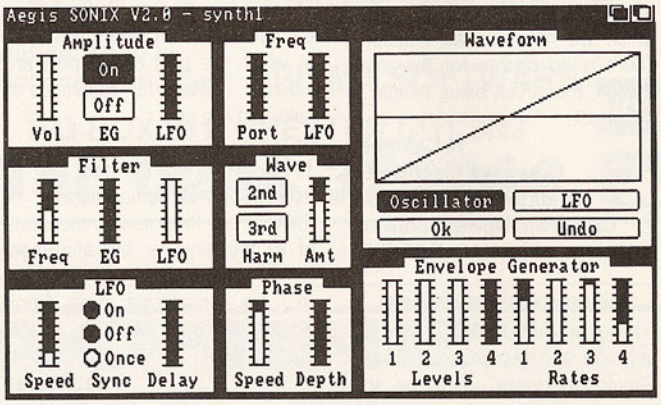
8) Power up and off you go!

Andrew James
Gosport

A2000? B2000?

It would seem that although the A2000 is a discontinued model, the title "A2000" is not, and Commodore continue to call present production "A2000 model b", or A2000 for short. Anyone who

SONIX NO-GO



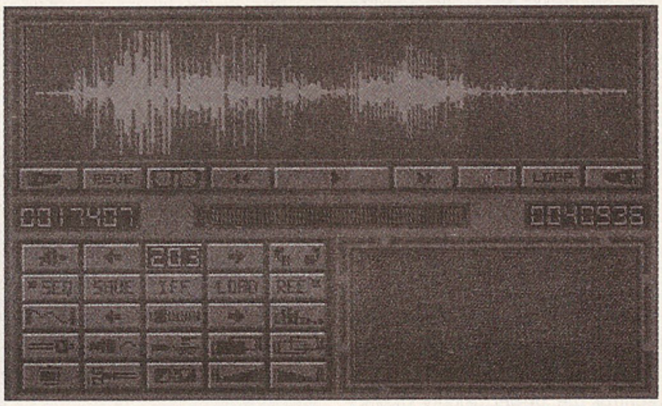
Sonix: one of the best ways to learn about the Amiga's sound capabilities is to just play about with it.

I have recently purchased the *Master Sound* system and *Aegis Sonix V2.0*. Unfortunately I am unable to load any samples from *Master Sound* or samples of my own into *Sonix*. I have read the *Sonix* manual on samples and the readme file but they are both unhelpful.

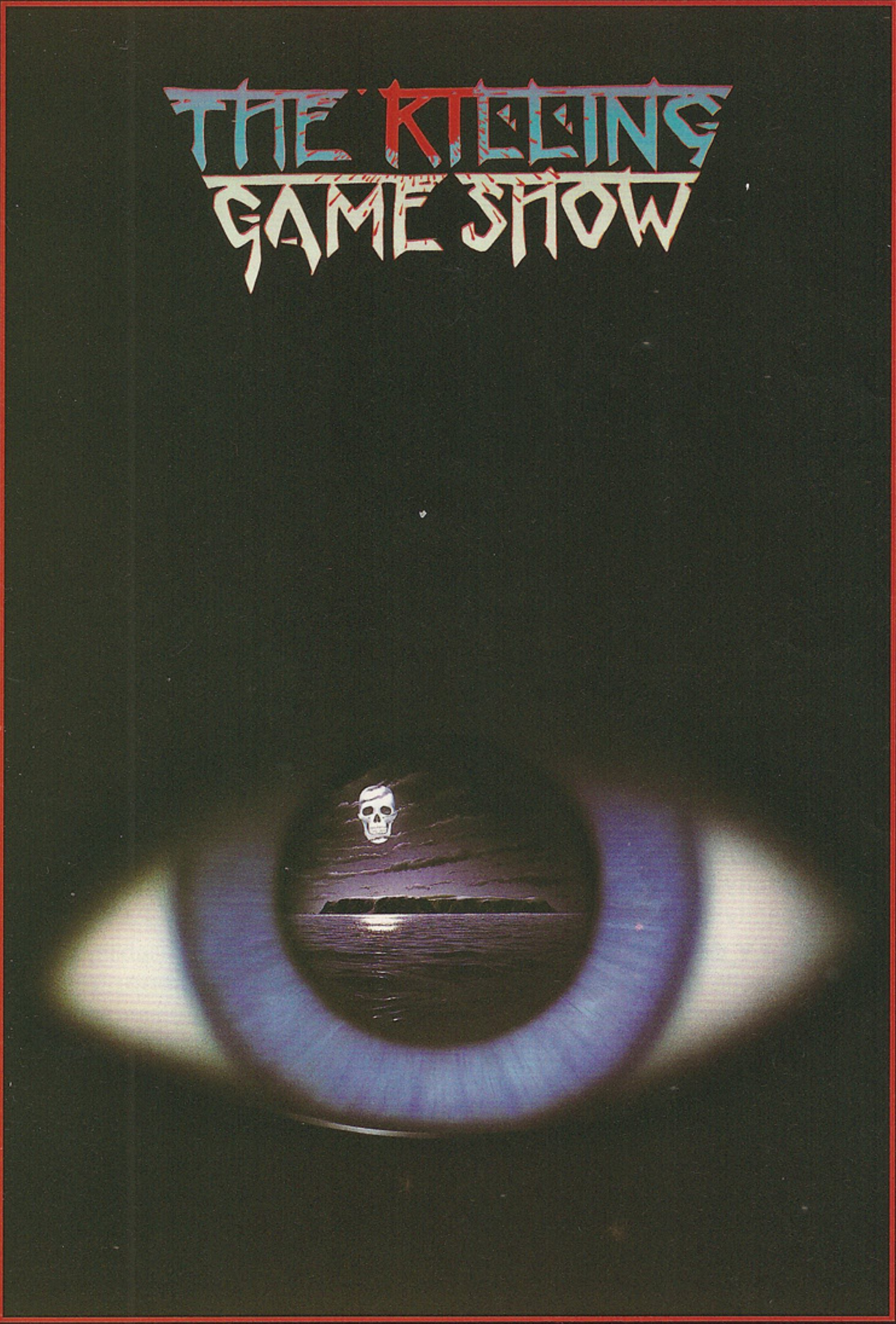
I've formatted a blank disk and created two directories, Scores and Instruments. I then save my samples in the Instruments directory. When I try to load them into *Sonix*, it doesn't show any samples on the disk. Why not?

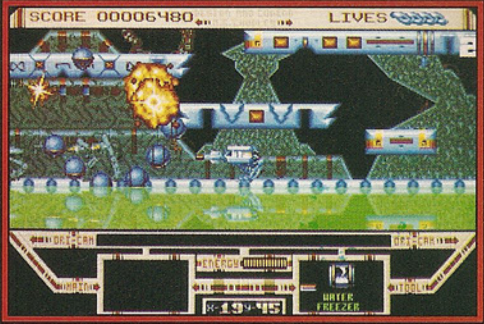
K Graham
Ellesmere Port

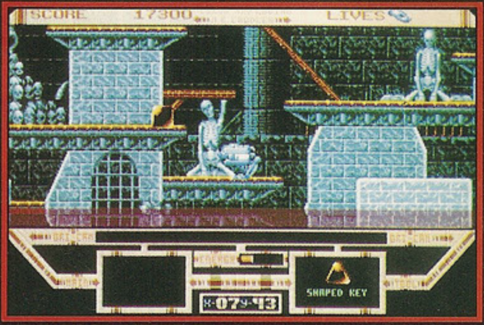
The only thing that I can think of is that you haven't included the suffic .IFF when naming your samples, ie SAMPLENAME.IFF. Try it and see if that works. Also,* Sonix *only works with multi-octave samples, so if you're trying to load single octave samples then it just won't work.



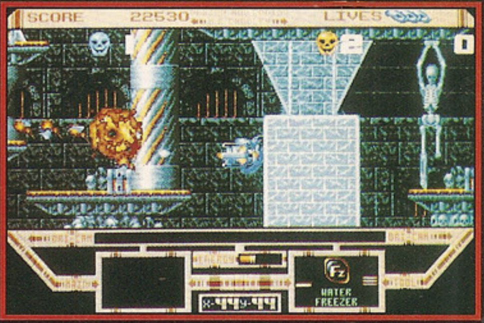
Most Amiga sampler programs are technical but very pretty. Master Sound is no exception.











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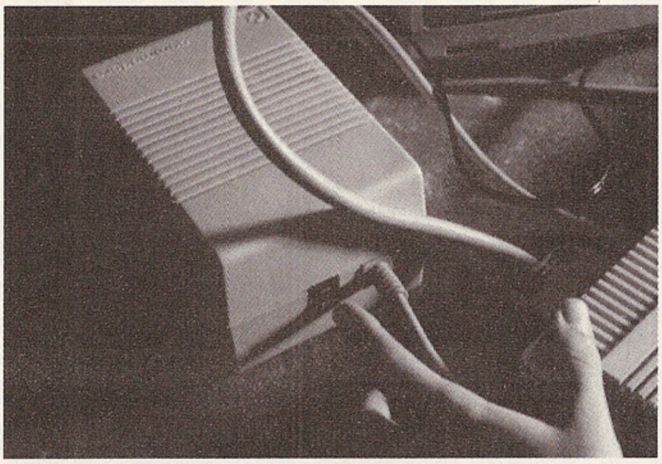
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BUZZIN' NUISANCE: The much maligned Amiga A500 PSU – it may be ugly but it does the job it's supposed to do.



WOT NO STICK: It's amazing the number of different bits and pieces that work with the Amiga: including Sega controllers.

wants to know whether their machine is a model A or B should look at the rear of the case. If there is a mono video port then the machine is B2000 since the original A2000 didn't have it.

If like me you are really suspicious you should take their machine apart and take a look at their fat Agnus. It should be an 8372 or higher.

Steve Love
Tankerton

With all this discussion about fatter Agnus, it should perhaps be pointed out that Commodore will be releasing an even fatter Agnus in the A3000 which can look at 2 megabytes of chip RAM.

BUZZIN' NUISANCE

After an hour or so of use, my power supply begins to buzz loudly. It's just a nuisance, but I would like to know why and how it's cured.

G M Dibley
London

The longer a power supply is plugged in, the warmer it gets. They work by changing the AC (changing electricity supply of the mains) to the DC supply that your Amiga needs. So, you have a box which gets fairly warm and resonates. Any loosely connected components get looser due to the heat and they will resonate in time with the AC power supply. And that's why it hums.

WOT NO STICK?

I was really disappointed when I found my Amiga A500 didn't have a joystick in the box. I tried using my Sega control pad and it works just as well. It saved me a trip to the shops to buy a joystick, and I bet there's plenty of other people who own Sega machines and who can't wait to have a play on their new Amiga.

Giles Dawe
Bristol

CHIP BRANDS

At the moment my A500 has 1 meg of memory. I would like to expand it to 2 or 2.5 meg, so I have been looking around at the expansion boards available.

There's an awful lot of them, especially ones that are empty or only partly populated with memory chips. Is it possible to use the chips from my first .5 meg expansion in these sort of boards?

CG Newby
Beagleston

Yes, although it's not always as easy as that. Have a chat with the various suppliers, tell them what your expansion is at the moment and listen to what they say. Use caution though: try and get it in writing that you will be able to plug your old memory chips into the new board before you actually go ahead and buy it.

MORE VERSIONS PLEASE

In the hope of creating the ultimate music compilation disk, I have taken it upon myself to contact you and ask if any readers have some tracking programs which I could include. I am particularly keen on early versions of *SoundTracker*. At present I have 2.0, 2.2, 2.3, 2.4, 2.5, 3.1 and 4.0 but I am looking for more. I would be very grateful if anybody who has other versions of *SoundTracker* could get in Touch.

Kris King
41 Paddock Green, Westlands, Droitwich, Worcs WR9 9HW

AMIGA FORMAT WRONG!

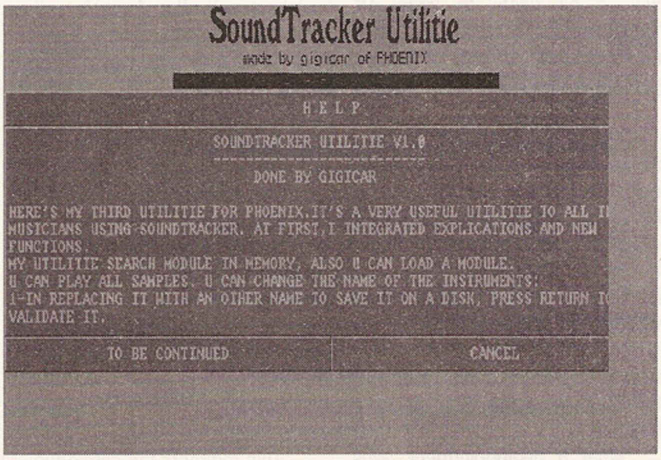
With Regard to Amiga PC emulation (page 147 AF 13), your Workbench Guru stated that a Bitcon XT board could be fitted for £320 which would enable the buyer to have the pleasure of running Next Base's *Autoroute*. You and my fellow readers may be interested to know that I have had the PC version of *Autoroute* up and running on my Amiga for some time, utilising the software based *Transformer*, priced (when it was available) at a hefty £25. Some difference.

I can guarantee that the reply to any query in any mag in respect of PC emulation will briefly mention *Transformer*, but will inevitably slag it off as being next to useless. Your man Keith Pomfret, true to form, announced that *Transformer*, at best, was pretty bad.

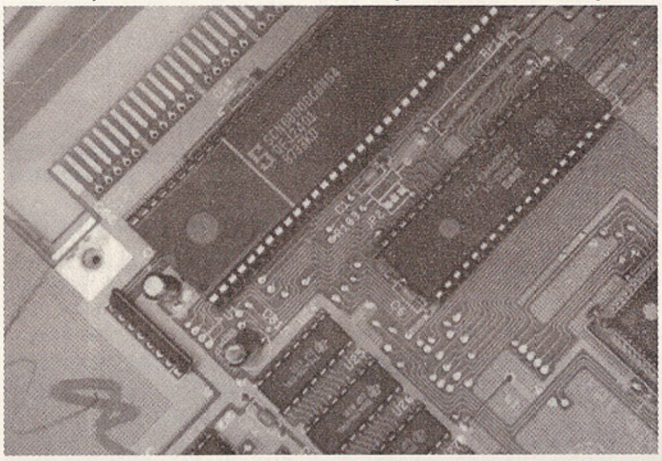
I think that it's time the record was put straight. I think that *Transformer* is bloody marvellous. Here's the pros and cons of it:

It cannot handle PC graphics, and on very large database programs (such as *Autoroute*) it does run slowly.

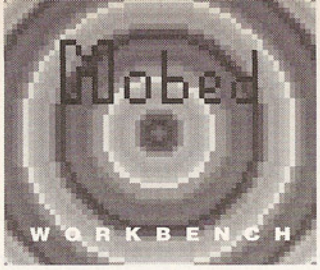
If you really want the graphical part of *Autoroute* then splash out £320. Me, I'm in no rush. Anyway, if I wanted PC graphics I would go and get a PC, but who the heck wants to do that when they already own an Amiga?



MORE VERSIONS...: The earliest version of Sound Tracker we know of is V1.0, available from Red Dwarf BBS (Modem 0424 217370)



CHIP BRANDS: There are literally hundreds of makes of RAM chips, so it's wise to check upgrades are compatible with your expansion.



So what about the good parts of *Transformer*: it boots in 15 seconds, and can be preconfigured in respect of screen colours and which of the two drives – if another one is present – you wish to nominate as drive A.

You then put in your copy of MSDOS (Not a pirated copy, I hope – ed) and voilà, you have a fully fledged PC system up and ready to roll. It will run any text based PC programs and has never hung, crashed, wobbled or faltered since I bought it.

All of a sudden, it doesn't sound too bad, does it?

Tony Melling
3 Woodfield Avenue, Hyde, Cheshire, SK14 5BB

No it doesn't. Thanks for the opinion and info which showed us up for a bunch of PC hating Amiga fans who would prefer in all honesty to see an Amiga version of Autoroute. *Not that I'm biased, you understand.*

Seriously though, you've made a fair comment and Keith was a bit hasty to write off Transformer. *For this application (ie Autoroute) it can do the job, as you've pointed out.*

MIDI GRIPES

I could hardly wait to produce my own spectacular tape from the Midi files contained on the AF 12 cover disk. Who scrambled all the tracks up? There's only one parallel file, and I defy Jon Bates or whoever to try and separate the six chords that play at once! I've been using *Music-X* professionally for almost a year now and it's beyond me.

What a disappointment. Why didn't *Dan Dare III* get the elbow this time? I'm sure there's a lot of Midi orientated AF readers who would agree with this idea.

On another tack, I read in Amiga Format some months ago that readers should 'avoid revision 6' of the B2000 series because of a 'timing error'. I note that Commodore is currently producing revision 6.2. I am using a revision 6 B2000 in a Video Graphics/Midi music studio with a great deal of success. Can you explain just what the problem is and how to solve it?

I've noticed that *Music-X* frequently displays a 'Not enough memory' message with well over a meg free on the Workbench. I just save my sequences, re-boot and the trouble doesn't happen again that session. I've always suspected a bug in *Music-X*.

Bob Saunders

Let's put it this way: the coverdisk is a huge conglomerate of programs aimed at a wide variety of people, and it would be terribly unfair to bias it at games players or Midi users or whoever. I try to support as many different areas as possible, and please rest assured that AF 12 isn't the end of the road as far as Midi related material is concerned – note the Midi Analyser program on this month's disk.

As for revision 6 being dodgy in some way: no, I'm not familiar with it all. I'll say this though: for a product to be released with any sort of problem points the finger at bad testing procedures. However, my own opinion is that it doesn't make a lot of difference. If you have a revision 6 board and are worried about it then talk to either the dealer you bought it off or Commodore themselves about getting a more up to date B2000.

FASTER DIRECTORIES

I have devised a handy tip for users of the SHELL, which can save them a lot of time when working with the Amiga's rather slow filing system.

Use ED or a similar program to edit the shell-startup script in the S: directory, and somewhere in it type a line which reads:

```
ALIAS D TYPE RAM:qwe
```

... and resave the shell-startup (ESC-X from ED). Now instead of waiting ages for a disk with lots of files on it to catalogue, just type something like:

```
DIR >RAM:qwe DF1:
```

This redirects the catalogue of DF1: to a small file in RAM: which can be quickly displayed on the screen by typing D (RETURN key).

This tip could well be common knowledge but I have certainly found it to be very useful.

Alex Harvey
Southampton

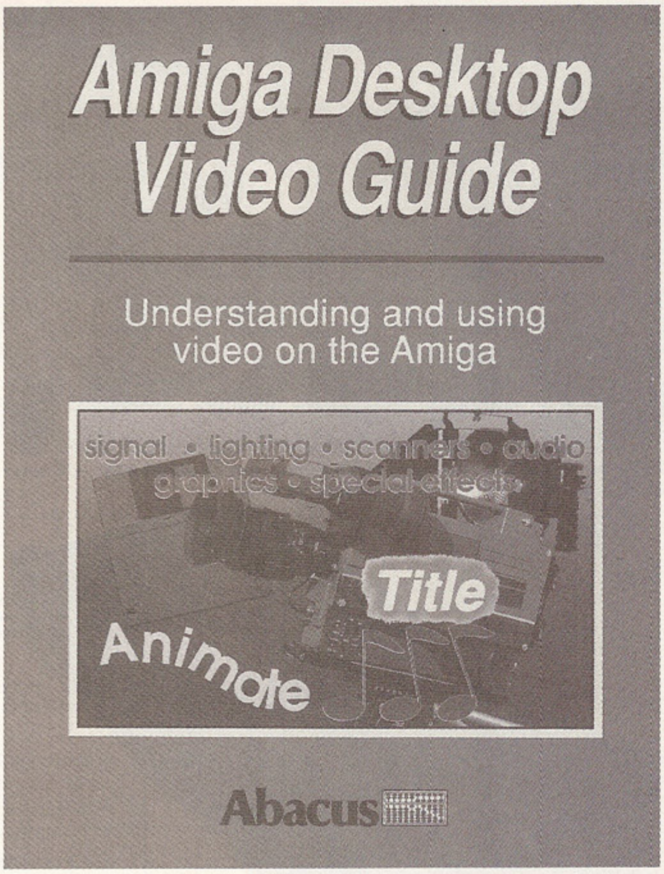
DESKTOP V-V-V-VIDEO

I am interested in producing videos of such things as weddings and local events. I own a one meg Amiga 500, a second disk drive, a Pye monitor and a Star LC10 printer. I also have a Sony SLV-270 video recorder.

I want to overlay simple animations over filmed material. What do I need? Could you also recommend a good video camera and some good reading material?

Robert Hart
Langley Mill

If you want to overlay computer graphics over video images, you will need a genlock device. I suggest you get hold of a copy of The Amiga Desktop Video Guide by Guy Wright, published by Abacus, ISBN 1-55755-057-3. Cost is £15.99. It explains pretty much everything you need to know about the subject and a whole lot more besides.



DESKTOP V-V-V-VIDEO: Abacus' Amiga Desktop Video Guide, as viewed by Newtek's Digiview Gold video digitizing system.

RAW AND THE COOKED

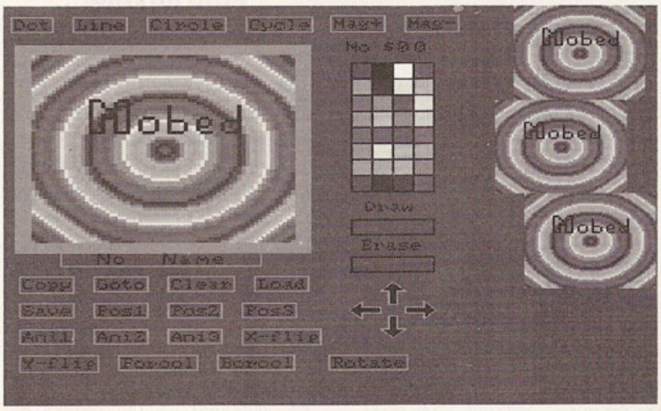
After following Dave Jones brilliant games' programming series my first game is well under way, but I have a problem.

I am using a good object editor to design my 16*16 graphic blocks, but it saves out the data as DC.W statements. So far I've been inserting them directly into my source code, but the graphic data is getting too big to handle.

I would like to use *Devpac's* INCBIN directive instead. How do I convert a file of DC.W statements into raw binary format? Is there a PD program that will do this, or an object editor that saves its data in raw binary format?

Gary Betts
North Lancing

Take a look at the PD Update pages this month, especially at the program Mobed which can indeed edit sprites and save them as binary data.



RAW AND THE COOKED: Mobed can be used to edit your sprites very well, Mr Betts. Yes it will save them as binary.

mph

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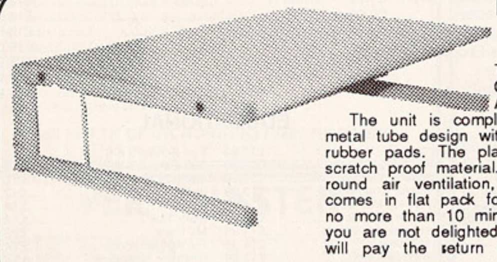
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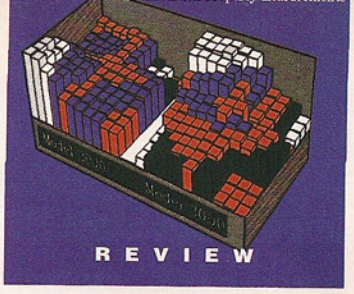
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CROSSING THE Big Blue HORIZON

If you're after a cheap PC, whatever you do don't rush to buy one. ANDY STORER advises you to look at a KCS PowerBoard instead...

The PC PowerBoard from KCS is the first ever hardware-based PC emulator available for the A500 and effectively transforms your Amiga into a fully-functioning IBM compatible for just under £300. With 1Mbyte of on-board RAM, the compact six-inch by three-inch card slips neatly into the RAM expansion slot located on the under side of the A500 and, after a short initialising boot program, opens the door to MSDOS.

The PowerBoard is effectively a PC XT on a card. At the heart of its hardware is a custom chip which passes all PC data transmitted from the PC chip – an NEC V30 – directly to the Amiga's 68000 for translation and direct writing to output channels. Thus information sent to the display screen, disk drives, and serial and parallel ports bypasses the usual PC BIOS routines entirely; by this means optimising performance. The main advantage of using this efficient method is that all screen handling is configured as direct screen I/O and, as such, PC programs which bypass BIOS to drive screen hardware directly are also fully compatible.

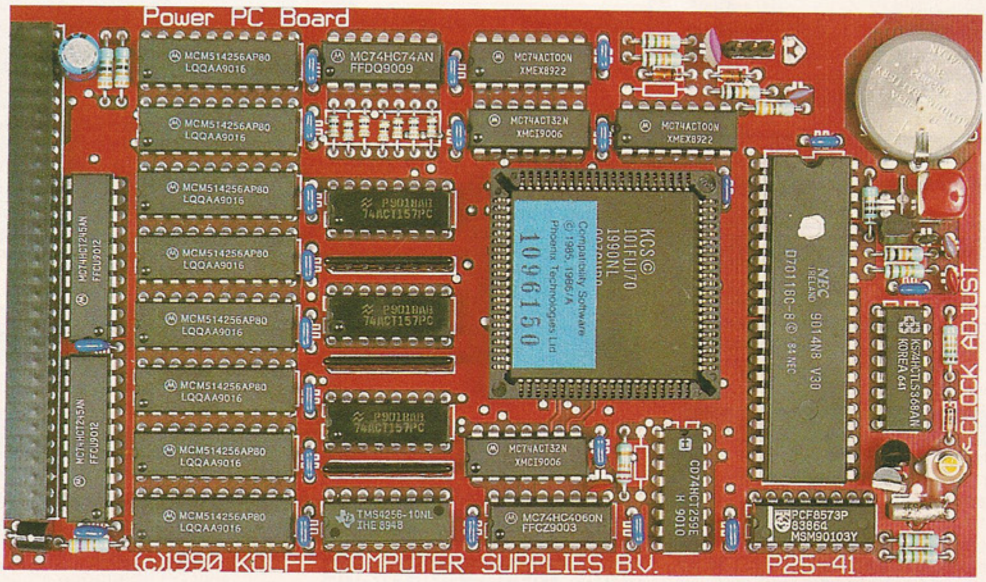
Dutch developers KCS have been working on the card for over eighteen months now and can claim to have turned in something of a programming coup. The PowerBoard utilises the RAM slot (the trapdoor) intended for dynamic memory chips, a method of entry at which Commodore's own engineers expressed amazement. How KCS has done it remains to be seen – perhaps there are ingenious interrupts at work in there, perhaps not – but whatever the method, the outcome has been successful.

Started with a Disk

To get up and running involves loading a short boot routine which configures the video mode, disk drives and attached peripherals the 'PC' will address. Here it's worth remembering that you don't have expansion slots for PC peripherals such as scanners and custom mouse cards: but Microsoft mice, joysticks, modems and printers are supported.

First of all you need to specify which disk drives will be used as PC devices. You can nominate the Amiga's own internal drive to act as a double-sided PC drive offering 720K of free disk space, or you can add extra 3.5-inch or 5.25-inch drives to your external disk drive port. But you can't configure your Amiga drive to read or write PC files while in Amiga mode – you'll still need *Dos-to-Dos* or *CrossDos* to convert them.

You can also partition an attached hard disk so that portions remain Amiga formatted while others become PC areas. Obviously, a hard disk will transform your use of the board, but check the section on hard disks (next page) for full details.



ABOVE: The KCS PC Powerboard shows off its compact lines.

Getting the Look

As far as PC video modes are concerned, the PowerBoard supports the mono MDA and four-colour CGA modes. Interestingly, configuring for CGA lets you use any of the Amiga's 4096 colours to replace the rather dull black, white, blue and purple colours of PC CGA. Although support for EGA and VGA modes is under consideration, memory is likely to be a problem: the more colours you have on screen, the slower the refresh rate becomes. As the NEC V30 doesn't have its usual accompanying video chip, the Amiga has to handle all colour information; the result being that to keep speed up to a maximum you would probably need an extra 2 Mbytes of memory.

At present, though, four-colour CGA graphics handle quite well – on their own terms – since CGA isn't exactly the bee's knees at the best of times. It may be blocky, but it'll let you run some PC games – though why you'd want to when you already own an Amiga is a different question.

Configuring for video mode also allows you to specify character size, cursor speed and whether you want interlacing on or off. This latter facility is very useful if you ever want to record PC displays to video as PCs don't readily offer this facility.

Last Lap

The final part of the initialisation process is to assign your communications ports for PC use so you can run serial mice, printers and modems. Here it's simply a question of specifying which ports will be PC Comm 1 and 2 and what baud rate you wish to operate at. You can also set up reset proof printer buffers and alter the

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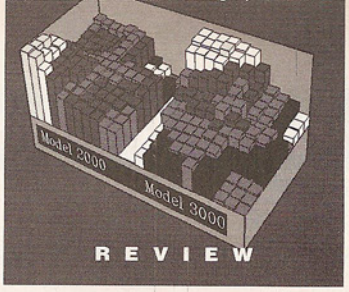
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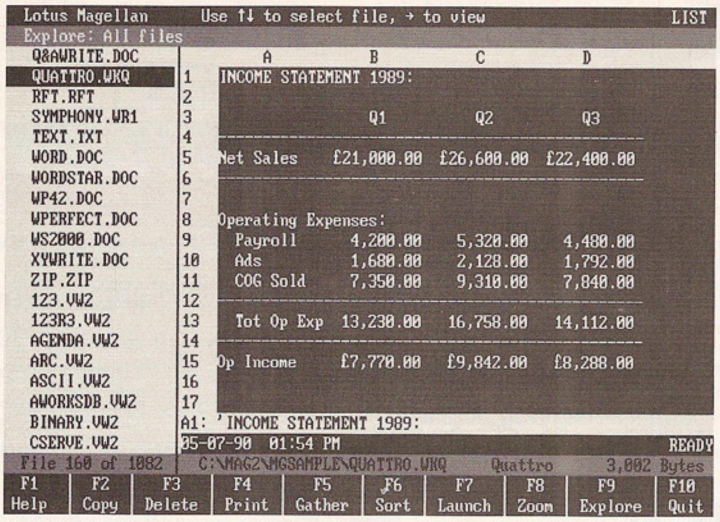
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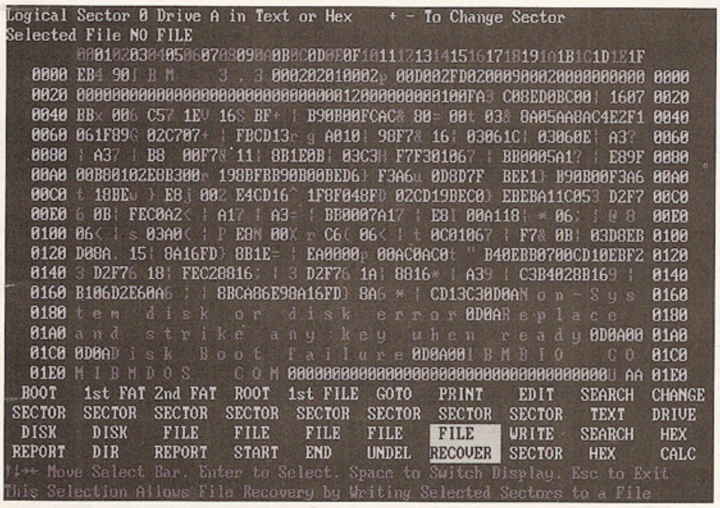
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keyboard's response rate. Once all of the menu configurations have been completed, a small file is written to disk containing all your choices so you may boot directly into PC mode. Alternatively you can save the choices as a six-sector file that can be attached to the boot sector of all your PC disks so that you can fire them straight up without even seeing your Amiga's Workbench.

Once in MS-DOS, all the normal PC commands are entered at the CLI and standard XT/AT software runs with no foreseeable problems and 704K at its disposal. All normal PC function keys are also emulated, so you can run through all those bewildering *Word Perfect* key combinations at the speed at which you have mastered them. To quit PC mode you have to soft reset. There's no facility to multitask between Amiga and PC modes since, as any A2000 Bridgeboard owner will tell you, multitasking in PC mode is painfully slow.

"Standard XT/AT software runs with no foreseeable problems and 704K at its disposal. All normal PC function keys are also emulated, so you can run through all those bewildering *Word Perfect* key combinations"

What's On the Board ?

The PowerBoard comprises a NEC V30 chip, a custom processor, a clock and 1Mbyte of RAM chips. The V30 is a 16-bit 8086 clone: in the PC Power Board it runs at a clock speed of 7.14Mhz. The BIOS used is the world standard for IBM compatibles – Phoenix. The on-board memory chips are intended to supply both PC and Amiga modes with 512K each. If you don't want to use PC emulation you can configure its associated memory as a RAM cache for the Amiga!

Besides a PC emulator which offers you an extra 512K of Amiga memory if you're not using it, you also get a RAM-resident DOS help program from Phoenix worth £55, PC GWBasic and Microsoft's MS-DOS v4.01, worth £80. As you add all these up the cost of the £299 emulator comes tumbling down.

HARD FACTS

In hardware terms, the board is a masterpiece. Not only does it provide a mating of two totally incompatible systems but it does it elegantly. The faster clock speed of the NECV30 goes some way to make up the speed lost by using the Amiga's internals to do the peripheral PC jobs.

To a regular PC user, the PC PowerBoard felt slightly slower than the desktop PC. Bench testing showed that the PC PowerBoard's perceived speed depended on the screen intensity of the program running.

Some display- and mathematics-intense programs ran more slowly and the way that the board refreshed the screen was decidedly 'Lego-like', although this was also a feature of some early XTs. By way of a bonus, most programs seemed to gain speed over their PC counterparts.

Software compatibility wasn't a problem. The only program that turned up its toes was *FUTIL*, a utility designed to look in all the nooks and crannies of a PC and report on its findings. The somewhat quirky *Autoroute* ran happily under PC emulation and various simulations and games made the transition to Amiga-PC without troubles.

Programs that used mouse, comm, and printer ports were able to utilise the equivalent ports on the Amiga and the only noticeable difference was that the Amiga keyboard is closer in design to the IBM AT than the XT. The clock on the PowerBoard works to the PC standard rather than the Amiga and a software patch is provided to allow the Amiga to access it in Amiga mode.

After installation, you have a machine that is a working PC, (even better with a hard drive), and a one megabyte Amiga. The only qualm is the lack of true PC expansion but a close look at the board's architecture and the Amiga's design confirmed that a PC card expansion frame sharing the same port as the hard drive could be the next surprise for Amiga owners.

Verdict

At the price and with the bundle offered, the PowerBoard would be a bargain even if it weren't for the speed at which it delivers. Screen handling is faster than many 286 ATs and PC peripheral hardware performs with no discernable difficulty. Of course, CGA is a drag, but that's hardly the fault of KCS. Most buyers won't be too bothered about graphics modes anyway.

In an Amiga you have ten times the power of even VGA PCs so why bother? Serious software is the answer: the PC literally has tens of thousands of applications to choose from and the largest collection of PD and shareware. So, if it's a cheap PC you're after, don't buy one. Buy the KCS PowerBoard instead.

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Ask, And It Shall Be Given... Maybe!

A simple, but effective, scheme for handling program startup and closedown operations is outlined by PAUL OVERAA.

The Amiga's operating system is multi-tasking. Many programs can be in memory at the same time and can be in a number of different states... running, waiting for user-input, waiting for a signal from another process, or temporarily stopped as the operating system gives some other program the chance to run.

In this type of multi-program environment the Amiga needs some way of keeping track of how its resources are being used. Programs must therefore ask the operating system for any system facilities they require... and must also tell the system when such facilities are no longer needed.

If, for instance, your program has to open a window in an Intuition Screen it must firstly open the Intuition Library and secondly open an Intuition Screen. Only if both these operations are successful can the program attempt to open a window in the screen.

Simple operations like these can, and often do, fail. Your program will not for instance be able to open a screen if some other program has already grabbed all of the available chip memory.

This being so programs must not only ask for the resources they need... they have to check whether such requests were successful or not. As we've mentioned, often the order in which you do things is important and in the case of the well cited beginner's example of opening a window you must adopt this approach...

As the program starts you...
1: Open the Intuition Library
2: Open an Intuition Screen
3: Open the Window

If everything opened properly you would, as the program finishes...
4: Close the Window
5: Close the Intuition Screen
6: Close the Intuition Library

Operations usually return a NULL pointer if they fail, so a non-NULL pointer usually indicates that everthing has gone smoothly. Most Amiga text-books, as you'll probably already know, seem to invariably suggest closedown schemes based on direct pointer testing.

If, for instance, the statement...

```
window = OpenWindow(screen);
```

was used to open a window then the equivalent shutdown code might be written as...

```
if (window!=NULL) CloseWindow(window);
```

or more simply...

```
if (window) CloseWindow(window);
```

Now, as an isolated example, this sort of approach is fine. But as programs get to more realistic sizes many more of these types of operations are needed. Memory assignment, raster allocation, creating screens and windows, setting up reply ports, device access, setting device parameters etc. It's not uncommon for a program to need one or maybe two dozen of these types of 'resource allocation' operations before it is even up and running! Experienced Amiga programmers know, and newcomers soon find out, that the Amiga does not tolerate programming sloppiness in these areas.

A few years ago I adopted an approach to this problem that, despite its simplicity, has proved to be very effective. The basic idea is to create a list of the things which need to be opened or set up and then use standardized routines to read this list and carry out the required operations. If, while carrying out these operations, some error occurs, the allocation routine reads the list backwards starting from the last successfully executed item. At this time however it then executes corresponding pieces of 'deallocation' code.

The result? Deallocation always occurs in the correct 'reverse order', irrespective of where the error occured. Normal, ie non-error, program shutdown is achieved by reading the whole resource allocation list in reverse order executing the appropriate pieces of deallocation code.

As an approach the idea is obvious enough, but it does nevertheless raise a few questions...

How do we define the lists in the first place?

How do we set up the allocation code?

How do we set up the de-allocation code?

How do we pair up segments of 'allocation code' with the corresponding deallocation statements?

How do we get the right pieces of code executed at the right times?

"How do we define the lists in the first place? How do we set up the allocation code? How do we set up the de-allocation code? How do we pair up segments of 'allocation code' with the corresponding deallocation statements? How do we get the right pieces of code executed at the right times?"

Perhaps the best way of answering these questions is to go through the steps I use when setting up this type of code. Here's the approach, based on a skeleton example, which shows how I'd set up the code for a number of routine operations... opening some libraries, allocating some raster memory, setting up reply ports and request blocks, opening and setting up the serial port for reading and writing... and opening screens, windows, and a disk font. Don't forget – it's the approach that's important, not the actual code!

Firstly some #defines are set up...

```
#define OPEN_INTUITION_LIBRARY 1
#define OPEN_GRAPHICS_LIBRARY  2
#define RASTER_ALLOCATION      3
#define CREATE_REPLY_PORT1     4
#define CREATE_REQUEST_BLOCK1  5
#define OPEN_SERIAL_DEVICE1    6
#define HIGH_SPEED_SERIAL1     7
#define CREATE_REPLY_PORT2     8
#define CREATE_REQUEST_BLOCK2  9
#define OPEN_SERIAL_DEVICE2    10
#define HIGH_SPEED_SERIAL2     11
#define OPEN_CUSTOM_SCREEN     12
#define OPEN_WINDOW            13
#define OPEN_DISKFONT_LIBRARY  14
#define OPEN_FONT              15
```

This allows us to create a resource vector (ie a one-dimensional array) which starts with a count of the number of operations to be carried out, contains the details of what has to be done, and most importantly of all, gives the order in which these operations should occur. We might, for example, build a list like this...

```
UBYTE resource_vector[16] = {15, /* count of operation labels to follow */

     OPEN_INTUITION_LIBRARY,
     OPEN_GRAPHICS_LIBRARY,
     OPEN_DISKFONT_LIBRARY,
     OPEN_FONT,
     RASTER_ALLOCATION,
     CREATE_REPLY_PORT1,
     CREATE_REQUEST_BLOCK1,
     OPEN_SERIAL_DEVICE1,
```

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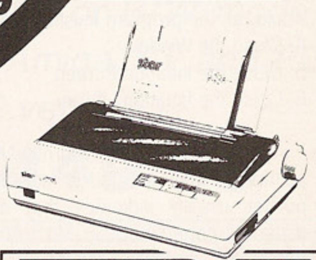
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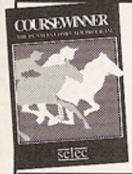
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```
HIGH_SPEED_SERIAL1,
CREATE_REPLY_PORT2,
CREATE_REQUEST_BLOCK2,
OPEN_SERIAL_DEVICE2,
HIGH_SPEED_SERIAL2,
OPEN_CUSTOM_SCREEN,
OPEN_WINDOW
};
```

All that is needed now is some loop code which will read through the globally defined resource vector and pass the number equivalent of our text definitions to a routine which contains the real allocation anddeallocation code. Listing 1 (below) gives a typical routine that could be used for program startup...

```
1: This routine handles 'error condition' deallocation automatically

BOOL begin_block()
{
UBYTE i,j;
BOOL allocate_resource(), error_flag=FALSE;
void deallocate_resource();
for (i=1;i<=resource_vector[0];i++)
    { error_flag=allocate_resource(resource_vector[i]);
          if (error_flag==TRUE)
          { for (j=i-1;j>0;j–){deallocate_resource(resource_vector[j]);}
          i=resource_vector[0]+1; /* force exit from 'i' loop */
          }
    }
return(error_flag);}
```

The minute that the allocate_resource() routine which I am about to describe returns an error you will get clean deallocation of everything that had previously been successfully opened before the error condition occured.

Using this list approach, program closedown is a doddle! Listing 2 (below) gives a corresponding routine which reads the resource allocation list backwards...

```
2: A loop routine which handles normal, ie error free, deallocation

void end_block()
{
UBYTE i;
for(i=resource_vector[0];i>0;i–)
{deallocate_resource(resource_vector[i]);}
}
```

So, what are these two routines actually doing ? They are passing allocation and deallocation requests to one of two routines which I have named allocate_resource() and deallocate_resource(). Both of these latter routines are based on giant switch statements which identify the segments of code to be carried out for any given request. Listing 3 is an example of a routine which provides the allocation segments. There are only two entries shown in printed listing 3 but don't forget that you can find another, complete, example on the Coverdisk...

SEE LISTING 3 (Right)

The equivalent deallocation routine (listing 4) uses the same #define labels, but here of course you specify the corresponding deallocation/shutdown code...

SEE LISTING 4 (Below right)

The benefits? To start with this approach eliminates the mis-ordering problems that can arise as new code is added to the 'test a pointer and close if non-NULL' approaches. To add new code just define a new label, add it to the resource vector (in the appropriate place of course), and then use this new label to identify the new pieces of allocation and deallocation code which are to be added to the switch statements.

Remember here that new code can be added ANYWHERE within these switch statements – the error handling will remain safe because it's the resource vector that controls the order in which the individual pieces of code are carried out.

As a program starts a call to begin_block() will attempt to allocate all the resources you need. If it fails it will handle the necessary deallocation and shutdown procedures automatically. If it succeeds then a call to the end_block() routine just before your program terminates will make sure that the appropriate pieces of closedown code are executed.

This approach fits very well into the modular environment which C can provide. I often place this type of code into a 'main' module whose job is to handle program startup and closedown and monitor the higher level user operations. You will find a complete example, in source code and in runnable form, ready and waiting on the Coverdisk.

```
3: Allocation code segments form part of a giant switch statement

BOOL allocate_resource(function_number)
UBYTE function_number;
{
BOOL error_flag=FALSE;
switch (function_number)       {
    case OPEN_INTUITION_LIBRARY:
    if((IntuitionBase=(struct IntuitionBase *)
OpenLibrary("intuition.library",INTUITION_VERSION))==NULL)
    {error_flag=TRUE;}
    break;
 case OPEN_GRAPHICS_LIBRARY:
    if((GfxBase=(struct GfxBase *)
    OpenLibrary("graphics.library",GRAPHICS_VERSION))==NULL)
    {error_flag=TRUE;}
    break;
 case OPEN_DISKFONT_LIBRARY:
 In real life each of these entries
 will contain appropriate code segments
 case OPEN_FONT:
 case RASTER_ALLOCATION:
 case CREATE_REPLY_PORT1:
 case CREATE_REQUEST_BLOCK1:
 case OPEN_SERIAL_DEVICE1:
 case HIGH_SPEED_SERIAL1:
 case CREATE_REPLY_PORT2:
 case CREATE_REQUEST_BLOCK2:
 case OPEN_SERIAL_DEVICE2:
 case HIGH_SPEED_SERIAL2:
 case OPEN_CUSTOM_SCREEN:
 case OPEN_WINDOW:
 default: error_flag=TRUE; break;
                                             }
return(error_flag);
}
```

```
4: This routine is the deallocation equivalent of listing 3.
void deallocate_resource(function_number)
UBYTE function_number;
{
switch (function_number) {
caseOPEN_INTUITION_LIBRARY: Close Library(IntuitionBase)
 ;break;
case OPEN_GRAPHICS_LIBRARY: CloseLibrary(GfxBase); break;
case OPEN_DISKFONT_LIBRARY:
 All of these entries have similar
 code sections which carry out the
 appropriate shutdown operations
case OPEN_FONT:      case RASTER_ALLOCATION:
case CREATE_REPLY_PORT1:
case CREATE_REQUEST_BLOCK1:
case OPEN_SERIAL_DEVICE1:
case HIGH_SPEED_SERIAL1:
case CREATE_REPLY_PORT2:
case CREATE_REQUEST_BLOCK2:
case OPEN_SERIAL_DEVICE2:
case HIGH_SPEED_SERIAL2:
case OPEN_CUSTOM_SCREEN:
case OPEN_WINDOW:
default:              break;
                              }
}
```

Presenting # PROTEXT 5.0

Five years to the month after Protext version 1 was launched Arnor are pleased to present version 5, an enormous leap forward in both ease of use and performance.

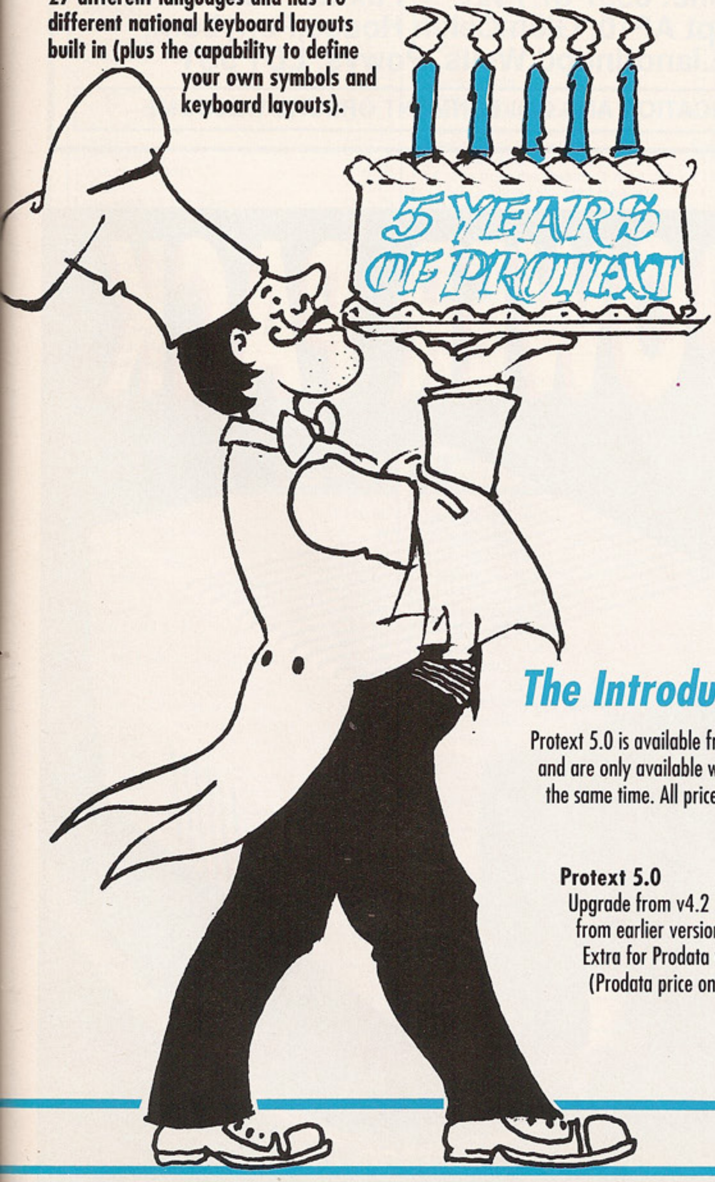
Protext 5.0 introduces a completely integrated system of pull down menus and dialogue boxes. The menus are among the many operations that may now be carried out with either the mouse or the keyboard. Protext really does give you the best of both worlds.

Protext 5.0 handles printer fonts flexibly and accurately. You can make full use of any number of proportional printer fonts, mix them freely within any line, centre them in headers, use automatically formatted footnotes. And Protext correctly formats your text as you type it, no matter how many font changes you use, showing you line and page breaks exactly as they will be printed.

Protext 5.0 is still the fastest word processor around. Even though we have made all these major improvements we have taken great care to ensure that text editing is as fast as ever. The menus work smoothly and quickly even with high resolution displays. But of course, you can use Protext's efficient set of commands and keys just as before and 5.0 remains compatible with all earlier versions from 1.0 onwards.

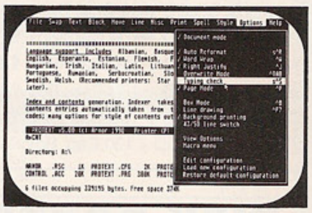
Protext 5.0 is a worthy successor to version 4, which was described as "the best word processor at any price", "the best text processor on the Amiga" and "the most powerful word processor on the Atari ST" (AUI, ST/Amiga Format, ST User).

Protext 5.0 heralds a new era of multi-lingual European software, in time for 1992 and the opening up of Eastern Europe. Protext may be used in at least 27 different languages and has 10 different national keyboard layouts built in (plus the capability to define your own symbols and keyboard layouts).



The Features

- **New fast & easy to use pull down menu system** with dialogue boxes and alerts; file selector; mouse dragging to set blocks. Menus complement existing commands and keyboard shortcuts, do not replace them. Menus may be used with mouse or keyboard. Amiga version follows Intuition guidelines.



- **Enhanced printing capabilities** supports multiple proportional fonts; mixing of different font sizes on the same line; proportional formatting whilst editing; side margin, headers and footers independent of main text font. Tabs, decimal tabs and centre tabs. Extensive range of printer drivers supplied.
- **Multiple file editing** - up to 36 files may be open; split screen editing.
- **Graphics mode support** on PC allows use in virtually any text or graphics mode including 132 column or 75 line VGA modes; user defined characters and on-screen bold, italics and underlining now on all versions; use of 14 different accents on any character.
- **Language support includes** Albanian, Basque, Czech, Danish, Dutch, English, Esperanto, Estonian, Flemish, Finnish, French, German, Hungarian, Irish, Italian, Latin, Lithuanian, Norwegian, Polish, Portuguese, Rumanian, Serbocroatian, Slovak, Spanish, Slovene, Swedish, Welsh. (Recommended printers: Star LC24, HP Laserjet II or later).
- **Index and contents** generation. Indexer takes marked words or phrases; contents entries automatically taken from titles wrapped in control codes; many options for style of contents output.
- **Spelling checker** features completely new 120,000 word Collins dictionary with very fast phonetic lookup. Anagrams and find word pattern. Foreign language dictionaries (German, Swedish available now, others to follow).
- **Many other enhancements** including multi-line footnotes and endnotes; automatic timed save; add column or row of figures; indent tabs; find word at cursor; 40 column mode support; sentence operations; inter- paragraph space; much improved expression evaluator; self incrementing variables; Roman numerals; newspaper-style column printing; file sorting utility with special options for names and addresses; revised manual plus new tutorial guide.
- **And don't forget Protext still includes** background printing; box manipulation; macro recording; exec files; headers and footers; find and replace; mail merging; undelete; file conversion utility; configuration program; auto reformatting; on screen help; time and date; typewriter mode; line drawing; disc utilities.

The Introductory Offer Prices

Protext 5.0 is available from late August 1990 for the Amiga, ST and PC. These prices are valid until 30 September 1990 only and are only available when ordering direct from Arnor. You can also buy our database, Prodata, for half price if purchased at the same time. All prices fully inclusive. Amiga and ST versions require 1 Mb.

	Aug/Sep	from Oct 90
Protext 5.0	£125	£149.95
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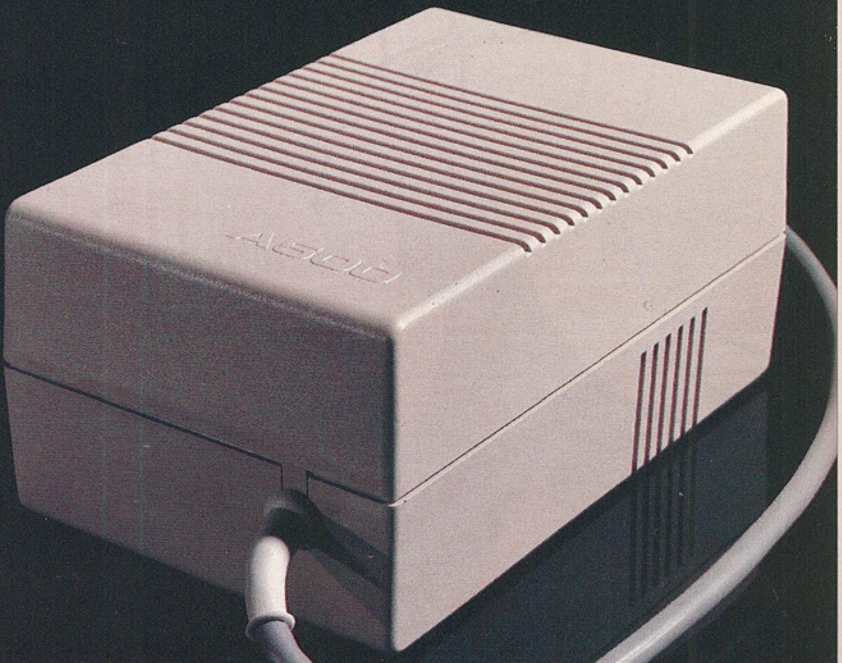
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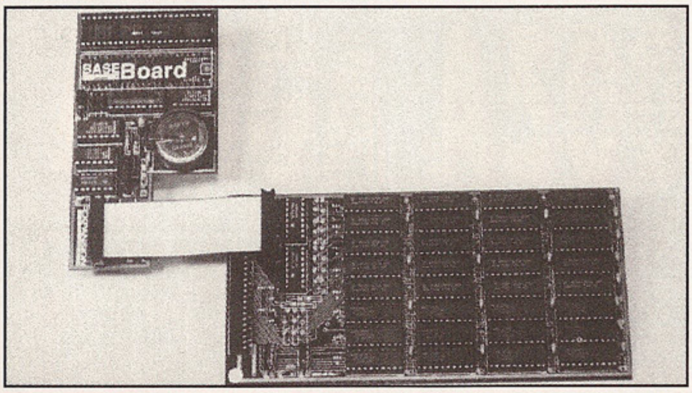
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The BASEboard is a memory upgrade card for the Amiga A500. It provides a battery backed clock and allows you to increase the memory of your Amiga to as much as 4.5 megabytes. If you need more just add the 2 megabyte XRAM daughter board and expand to a total of 6.5 megabytes. All without using the expansion bus. The memory can be increased in 512K increments by adding industry standard low power 256K X 4 (DIP) DRAM chips in the sockets provided. The BASEboards unique design allows contiguous memory blocks of 2 megabytes for the professional video user and dedicated game player. The BASEboard is fully compatible with both the 512K (Fat) and 1mb (Fatter) versions of the Agnus chip. It supports all versions of Kickstart and all revisions of the A500 mother board The Baseboard is eacy to install. It uses a memory board that installs in the A501 slot and the "Gary" socket. The ultra quiet multilayer memory board insures data integrity. The Baseboard upgrade gives you A2000 memory power at A500 prices.

Features:

- 4 megabyte increase in memory
- 2 megabyte daughter board increases total to 6 megabytes.
- Memory boards fits in A501 slot in base of A500
- Battery backed up clock
- Multi-layer (4) memory board insures data integrity
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Are your standard Amiga fonts looking tired and dated? Don't have the time or patience to design new text styles? MAFF EVANS looks at an attractive text alternative.

Any sort of presentation on the Amiga, whether it be DTP applications, artwork or game screens, needs to have a polished appearance. Text-styling is a very important factor in this field, but the standard Amiga fonts may not be quite adequate. Repeating the same styles time after time can make screens look tired and another – perhaps more difficult problem – arises when fonts are resized.

Since the standard fonts are held as a collection of pixels, increasing the size creates a blocky effect known as the 'jaggies', whereas shrinking letters down can make them virtually unreadable at times. But what can you do to rectify this other than sitting down for several days with a font editor?

If We Can Outline The Problem...

Gold Disk have a solution to both these problems in the shape of *Outline Fonts*. The 35 fonts included in the five-disk package are held in Compugraphic form, which means that all characters are constructed from line and curve data rather than being bitmapped. This means that the fonts are perfect for use in DTP and CAD programs which need to be able to handle a range of typefaces at a number of different sizes. The fonts can also be downloaded to Postscript format, so that perfect quality output can be gained from virtually any printer, from dot-matrix to laserjet.

If you want to use the fonts in a much less 'highbrow' application, then you can use the included 'Createfont' program to generate standard bitmapped fonts ready to use in just about any Amiga application. Createfont allows you to load in a font, alter the point size, change both the horizontal and vertical DPI settings and save the font out under your own customised font name.

Slick Writing

The fonts included on the five disks are of a very high quality and will undoubtedly prove useful in a wide range of situations. The main problem comes in actually installing the fonts. This is all fine and hunky-dory if you're lucky enough to own a hard drive, since the disks include automatic installation programs and, of course, you have a great deal of storage space to work with. If on the other hand, you are working with a standard Amiga with a floppy disk and the standard Workbench, then you could run into difficulties.

Since Createfont writes character data directly into the Fonts directory of the workbench, you will undoubtedly hit the message 'Volume Workbench 1.3 is full', only to have your newly created font data thrown out by the computer. The only way around this is to set yourself up with a working system that will allow you to write fonts into your own directory on a much emptier disk. Unless you know your startup-sequences and bootblocks, then your are going to find yourself up a certain creek without a certain paddle.

If you reckon you can get around the problem and you need some nice bits of writing for your Amiga, then *Outline Fonts* is worth checking out. Just bear in mind that beginners to Amiga designing should tread very lightly indeed.

Triumvirate Bold

ABCabcHIJhij ABCabcHIJ ABCabcHIJhij

ITCAvantGarde

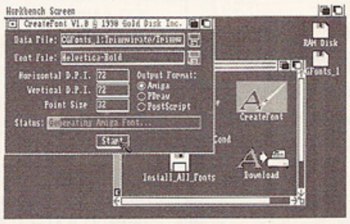
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Above: examples of four of the new typefaces provided. Left: the Createfont program in action. Below: examples of what Createfont can do to your text.

The quick brown fox

Normal Bitmapped Amiga font stretched to size

The quick brown fox

Outline Font resized with Createfont

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b) Peter Shilton
c) Billy the Fish

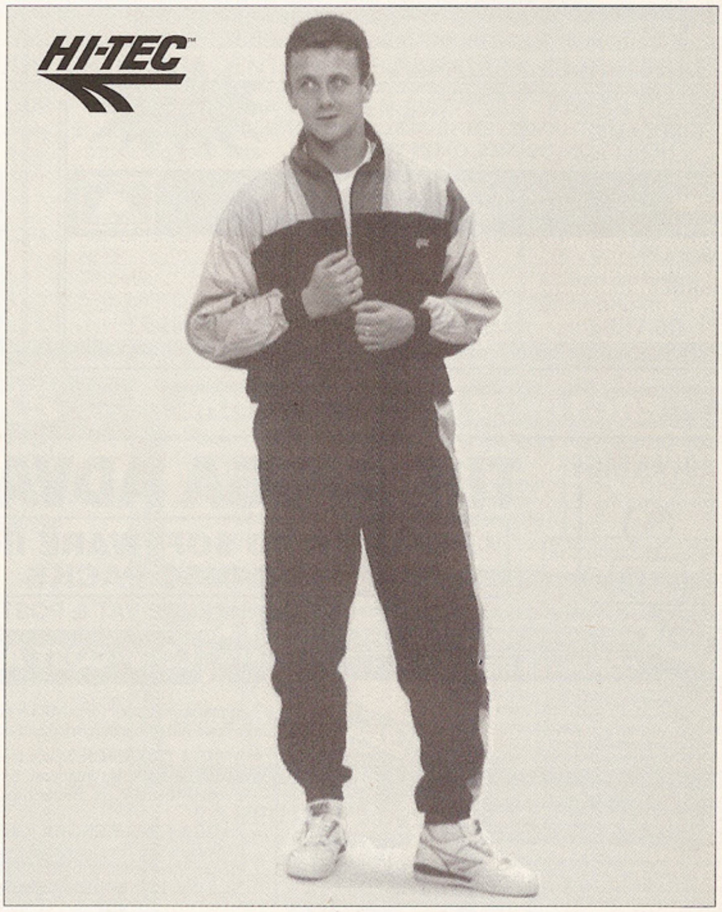
2. Who scored Arsenal's Championship winning goal against Liverpool at the end of the 1988-89 season?
a) Mitchell Thomas
b) Danny Thomas
c) Thomas the Tank Engine

3. Which of these pairs of teams won the FA Cup for the first time in their history during the 1980s?
a) Watford and Tottenham
b) Wimbledon and Coventry
c) Everton and Liverpool

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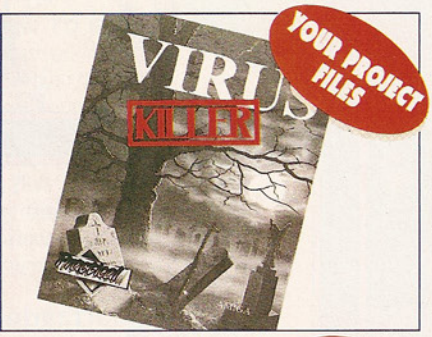


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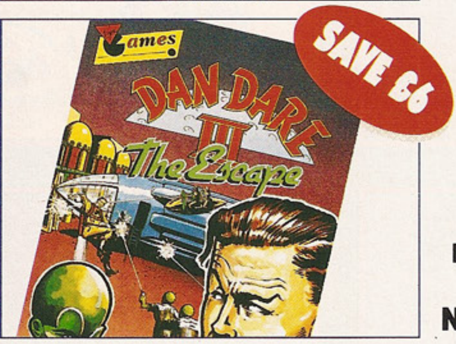
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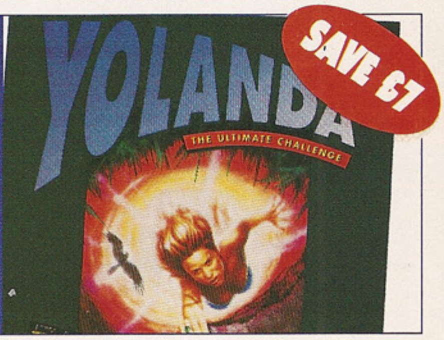


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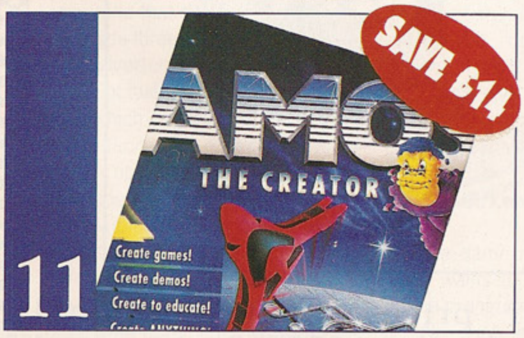
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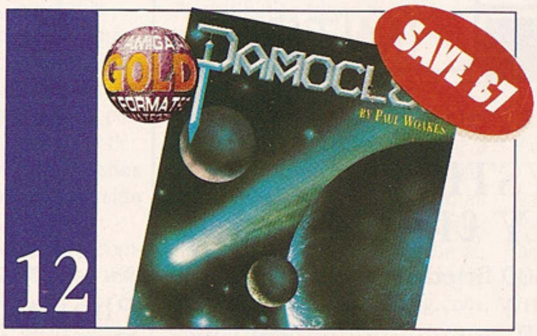
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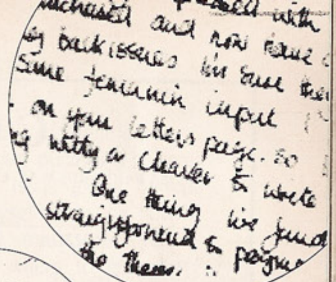
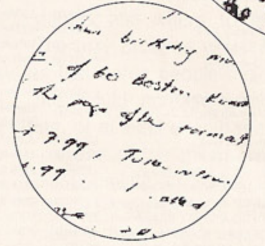
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Letters

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Oldie but format goldie

PRIZE LETTER

I was interested to read that your readers questionnaire shows that over 50% of us are over 24! I myself am 100% over 24 and the relief of finding that not all AF readers are apparently between the age of 8 and 17 will probably mean I will tough it out for the next issue, discard my cool and spotty youth disguise and revert to my more comfortable walking stick and slippers to go to the papershop.

This raises the question: why not have a space for the interests of your more mature readers? Perhaps a replacement for the soon to be strangled Guru Meditations area (anything named after the Amigas least useful and most meaninglessly annoying feature deserves all it gets).

Any mean little space would do as a haven for us old campaigners, somewhere with a little bit of quiet, away from the clatter of over used joysticks and the desperate hyperbole of your reviewers (who should be ordered to produce yet another FORMAT GOLD! review, without being allowed to use the words "greatest", "superb" or "enjoyable", serve the young whippersnappers right I say).

What's needed is a place to sit undisturbed for a while with pipe and slippers and chew over some of life's quirks and great computer users mysteries, like: is it true that the first 3.5" disks were mistakenly sent out with the labels upside down, (perhaps the real answer is that the first 3.5" drives were see-through?), thus leading to an inadvertent standard (sadly the ONLY actual standard in computing), which means anyone with an ounce (sorry, 28 grams) of sense, writes upside down on all their disk labels so they can actually be read without having to do handstands. Or, perhaps you could use it for some really useful readers inputs like: My most rubbish PD buys (with comments to warn others off!) Perhaps readers could come up with some answers to a series of questions brought about by that Aussie lager Ad on TV.

1. Why is it the brewers are prepared to go to such great expense to have their product associated with a video game that looks about as interesting as two monkeys sitting on a log throwing bananas at each other?

2. Is there such a commercial game available?

3. Is it as appalling as it looks?

4. Why have I never seen it reviewed in AF? And (if I missed it) did it make FORMAT GOLD?!

Yes, what I'm asking for on behalf of us less overactive majority is a less naive, more experienced view of all things Amiga. The sort of thought provoking area which will give us a gentle chuckle (and more than likely a little coughing fit as we stub out our stogies) a place to philosophise on how the world is, before gently shuffling off to decapitate every monstrous sprite that dares to put its ugly head over the parapet.

What I'm also asking for is some humour, some balance, some gentle provocation?

Don't take this as criticism, your is the best Amiga mag out but don't stand still, improve it.

Maybe instead of a Amiga Format t-shirt, and an A4 binder you could give the alternatives of a comfortable cardigan and a pension book cover (serve me right)?

E A Jones
Birkenhead, Merseyside

1. The same reason a tyre company wants to be associated with some orangutans.
2. No such game exists that I know of.
3. It certainly looks dire.
4. If anyone ever converts it to the Amiga I'll give it full marks for the name but nada for the gameplay.

Well kicked off!

I am writing to you to warn other readers about Anco's misleading advertisements. In their ads for *Kick Off 2* they clearly state that scissor kicks are possible and the labelled Amiga screen shots contain referees. Neither of these features exist in the Amiga version even though the back of the box clearly states that you can: "....head or chip a ball and do sliding tackles or scissor kicks." The same screen shots of referees are used as well.

I rang up Anco to complain and they told me that the version available at the moment is *Kick Off 2 Plus World Cup '90* and this version doesn't have scissor kicks, referees or any extra features on 1 Mb STs and Amigas. I was told that Anco would be releasing *Kick Off 2* some time in August and this would be complete and have referees on 1 Mb Amigas like mine and scissor kicks.

How can a company say one thing in their adverts, packaging and instructions but mean another thing? I have tried to take my *Kick Off 2 Plus World Cup '90* back so I can buy the complete game in August but as far as the shop was concerned this was the official and only version and so I would have to keep it.

It is clear that Anco have rushed Dino Dini into producing a version that would coincide with the 1990 World Cup fever and as a consequence it is incomplete. *Kick Off 2* will undoubtedly be an excellent game, it is just a shame that it hasn't got a publishing company to match!

Richard Green
Birkenhead, Merseyside

Anco are indeed bringing out a version of Kick Off 2 *with referees and scissor kicks in it, but, by their own admission in our sister magazine New Computer Express, it is not an improvement on the version you already have because the additions tend to slow the game down and not add to the gameplay. So, seeing as* Kick Off 2 *is already a superb game as it is, I would settle for the version you've got and not worry about the other things.*

Demo demand

To start with I would like to wholeheartedly agree with the brilliant proposal by James Abram, who suggested that the software companies produce cut down demo versions of their software. I would also like to add to his comments regarding the distribution of the demo disks.

A software company produces a pieceof software, say for arguments sake an accounts package, and establishes a very competitive price of £79.99.

To advertise it spends a large sum of money in various computer magazines to promote its new creation, as well as sending several review copies out.

The company may then wait to find out how the package rated, and if it did well, if there were any good reviews or if there were comments that could be incorporated into the package saying how great Amiga Format thinks the Acme Accounts Program is.

The program would then go to various distributors and through them to various shops. Ok it may be a naive scenario but it fits the purpose of this letter.

Going back to the suggestion by James Abram. If this software company were to produce a special cut down version on public domain, where all the features of the package are intact other than the Save facility and say a comprehensive summary of instructions, they could send some of these to the distributors, who, when a shop orders a batch of these programs, will send the demo version with the order.

This could then enable anyone interested in buying an accounts package who is making enquiries at his local computer shop to receive a copy of this and any other demo account packages and

see which he thinks is best suited to his needs. He could buy a copy of the disk for, say, £2.00-£3.00 and then when returning to purchase the actual package, the shopkeeper could offer him a refund for the return of the demo disk. If he does not wish to purchase, the user could keep the demo, or delete it and use the disk as a blank (for whatever package he does buy).

As well as the shops, the demos could also be sold to the PD libraries, who would in turn sell them to the public, thus enabling all interested parties to make a better judged choice in software.

Now, although this is hardly a cure for piracy I think it could stop some pirates who believe that because the serious software costs so much they need to try out the package on pirate copies first, and if they like it they can buy it once they have saved enough money (this usually means never, who wants to buy something he already has). Which is no real justification but I've heard the argument being used once too often and in my opinion just using it once is too often.

It would stop people who might otherwise have shelled out on an expensive piece of software and then find it is not quite what they want, and then after having it for six months the current price for the same package has gone down, which means by selling second-hand they will suffer a loss.

S K Hussain
Edmonton

Falcon's wings clipped

Unfortunately, one of the games I have bought recently appeared not to work (*Kristal* with four disks!) and I have returned it to be tested and replaced. Is there a difference between some Amiga 500s which means that some programs won't work on some but do on others? I don't mean differences in the Kickstart as I know that the commercial companies released new versions compatible with both.

The reason I ask is that a customer in the computer shop, for which I work, bought and brought back *Falcon* for the Amiga, saying that it would not load. I gave him another copy and took the other back home to test, to find that it worked fine. The following Monday, he brought the other *Falcon* back and told my boss that it didn't work. By chance I called in on my way to college and found out what was happening, telling the man that I had tested the game he had brought back and that it had worked fine. He still insisted that it would not work on his computer, so I called at his house on my way back from college to check this out. Neither copy of *Falcon* loaded on his computer, both got a guru about 30 seconds after he put disk two in the internal drive. He has exactly the same computer as me with Kickstart 1.3, but *Falcon* loaded on mine and not on his. He has no extra memory or external drive as I have, but this should not affect the loading, should it?

David A Linacre
Chesterfield, Derbyshire

There are differences between models of the A500, but these are minor and only occasionally cause incompatibility with a program that 'breaks the rules' that ensure compatibility. The problem with Falcon *could be that or it could be a problem with your customers internal disk drive. This is because some loaders are more finicky than others.*

Musical heretic

About two years ago I wanted a computer that could be used for music applications, such as MIDI sequencing, sampling, etc.

On searching for the ideal machine, I narrowed my choice down to the Amiga or the Atari ST, after weighing up cost and performance, I spent months deciding until eventually buying an Amiga B2000 with XT bridgeboard.

The reason for this choice was because of the Amiga out performing the Atari ST incorporating dedicated ICs to improve on the graphics, animation and sound performance. Also, the XT bridgeboard was useful as this would open up a wider choice of hardware and software applications.

When it came to choosing software, I purchased *Music-X* as it catered for nearly everything I wanted to do with my MIDI set up.

Now, two years later, I think purchasing the Amiga was an expensive mistake. Why? I hear you say. Well, firstly, lets look at the current available music software for the Amiga in comparison to, say, the Atari ST, Macintosh II and the IBM PC. Below is a table that I think illustrates the up-to-date available software for the listed computers.

MIDI Sequencing – Amiga, Atari ST, Macintosh II, IBM PC
8 Bit Sampling – Amiga, Atari ST, Macintosh II, IBM PC
16 Bit Sampling – Atari ST, Macintosh II
Direct-to-Disk Recording (16 Bit) – Atari ST, Macintosh II, IBM PC

Secondly, *Music-X*, when it was first released (about a year ago), boasted the excellent facility of being able to edit patches of your synthesisers within the main program, and the program included the patch editor for four synthesisers and many more were to follow.

A year later, still only four patch editors. Alternatively, there was the Generic editor, but come on, who in their right mind edits a synth by altering HEX numbers on a computer screen!

Another annoying thing about patches for synths was when looking at advertisements in MIDI music magazines that were advertising new patches for synths, but only available on 'self loading Atari ST disks' or PC format – but not on the Amiga!

It seems to me that when it comes to professional music, the Amiga is left by the way-side.

I have been a regular reader of your magazine and consider the reviews to be well balanced and entertaining. I would therefore appreciate your opinion on this matter, before I possibly make another mistake by selling my Amiga. Maybe you know something I don't, in what is to come in the form of new music hardware and software.

N Atkinson
Rossendale, Lancs

Well I certainly would not rush out and sell your Amiga because, as you will see from this issue's music pages, there are studios that use the Amiga and there is more software on the way for MIDI users. A new version of Music-X is currently under development and in next months issue you will find another new midi program called Trax *being reviewed.*

Charitable contribution

I read your Public Domain Update column regularly and find it very informative. However, I have now written a game which I feel would do very well as a PD title, but I have no idea as to how to go about marketing it.

Do I just send the game to a PD library and hope for the best? Furthermore, if I write (for example) a walker demo or perhaps an upgraded defender style game, are there copyright laws which guarantee that I must get written permission from the original authors before I churn out my very own version?

The Gamebusters column is very good, as are the hacks placed on the cover disks. I have always been interested in how people actually manage to crack games in this way – looking through an entire listing and trying to find where a cheat mode can be installed must take months!

How about publishing a small feature one issue giving novices (such as myself) hints on how to write cheat modes to various games and where to find them? The only problem which I can see is that some people may say that this would increase criminal hacking, or at least encourage it.

One of the things which I find disappointing in some games is the death sequences. This is especially true for shoot-em-ups because when the player's ship is destroyed it just explodes in a ball of flame. Usually, this same death sequence is shown no matter if the ship runs into a bullet, hits an asteroid or is plastered into a brick wall.

Some types of games (such as arcade-adventures) offer more scope for their death sequences. Some notable examples are *Escape from the Planet of the Robot Monsters*, *Dragon's Lair* and *Marble Madness*. All have several death sequences which are chosen as appropriate. This is visually appealing and sometimes worth dying for just to see the player meet his/her end! I think many companies should spend more time on their death sequences because as well as being attractive, they urge people to have another go at the game, because then they will not feel half so bad about losing.

There have been hundreds of games released over the past year since I purchased my Amiga and a lot of money has changed hands as a result. However, one thing which does not seem to be evident on 16-bit machines when compared with the C64 is the introduction of charity compilations. Some of these compilations on the C64 (my former machine) there were many good, albeit old, games being sold at a reasonable price, with all proceeds going to a worthwhile cause. So how about doing such a charity compilation on the Amiga?

Companies have so many games on their hands these days than they know what to do with and, as a result, have even given some away FREE to magazines for use on coverdisks.

If companies are willing to do this, surely they have a heart and can give away some games for a good cause. If several companies participated, they wouldn't feel a loss in profits, as many elderly games will not sell at their original prices anyway.

The types of games I am talking about are *Road Runner*, *Carrier Command*, *Impossible Mission 2* and *Bubble Bobble*, as

these games seem to have almost vanished from existence.

So come on all you major companies, clean out your warehouses and find the games with cobwebs on – then organise a charity compilation, okay?

Stuart N Hardy
Wales, Sheffield

Fired up again

Last weekend, a friend of mine brought round a few copies of your publication to show me, specifically two letters, one called 'Cannon's Broadside' (Letters, issue 3) the other 'A Free Virus Killer'. (Workbench, issue 3)

The reply to 'Broadside' was predictable and expected, only why did you print it in the first place? Was it to discourage those whom I ridiculed, or was it to encourage some feedback from your readership, testing the waters so to speak. Either way, I care less, only if that letter escaped the letter bin, what are the ones you discard like?

The 'free virus killer' letter I wrote has annoyed me. However, don't get me wrong, I would help anybody, but you took liberties. In the first place, where did all this dross about small print come from, certainly NOT from me, secondly, the final part of the letter that you printed would lead an inexperienced user to INSTALL his/her non-standard disk, commercial games etc, providing the "MAY NOT BE STANDARD V1.2/1.3 BOOTBLOCK" message was returned.

Now my original letter only covered it's use and possible messages it could invoke. You have taken this, added some stupid comments about the manual writers at Commodore, size of fonts, and then incited the less knowledgeable user to quite possibly ruin a disk, then finished it off with MY name.

Not content with that, you then reprint it in July's issue. As I said, I don't mind helping anybody, but I draw the line at helping you fill three pages for nothing, especially when the article you put my name to had little resemblance to the original and could have disastrous consequences.

Should you decide to print this letter as a cheapskate way of padding out your publication, perhaps you would print a warning to anyone using the INSTALL CHECK option that it is only a guide and NOT conclusive evidence of a virus! Instead, I'm sure your readers would appreciate some helpful advice instead of one of your dreary little quips that seem to accompany all letters you print.

C W Cannon
Romford, Essex

You will forgive me Mr Cannon if I take exception to the sort of vitriol that was contained in your letter in issue 3 – I don't mind criticism but I do object to myself and my team being insulted. My right of reply, like yours, is through the pages of the magazine so I do print critical letters so that I can deal with the issues raised by them.

As for the rewriting and reusing of your virus killer tip – we rewrite most contributions to one extent or another to make them clearer or more entertaining, not jut for the hell of it. As for reusing it, that was because it was such a good tip that it justified putting it into our round-up of the best tips from Workbench.

Thanks for your warning about being careful with the use of the Install command, that is something we should have pointed out.

"And finally Allistair..."

"...and finally Sandy, the dreary little quip at the end that accompany's all of the letters we print. Good night."

Female thunderbolt

I am writing in response to the results of the Amiga Format questionnaire – is it really true that only 4% of readers are female? I was quite surprised! However, as a female undergraduate who has spent the last year in the computer science division of a university where the female to male ration was a ridiculous one female computer student: ten+ male computer students it has made me think that this is a sad reflection on the world of computing as a whole! I have to wonder if it is still the case that computing careers are still not presented attractively to women.

I have been an Amiga addict for over a year and have to disagree with Sara Maidstone, who wrote in Amiga Format issue 12, and who gave me the impression that she thought that the computer industry did not realise female software interests. The current range of software for the Amiga is excellent, with a wide range of interests satisfied by the market from good graphic adventures, business application packages and educational software to stunning shoot-em-ups. I think that male and female interests in leisure software are more or less the same. Speaking for myself, I like good quality adventure games but also appreciate action games such as *Xenon 2* and *Gauntlet 2*. The software industry should not have to account for female/male differences in their software since the market offers a good range of software to interest everyone, and after all everyone has different interests and tastes which are not really attributable to their sex.

Sara asked in her letter why more female readers do not write in? Well lets face it, if the questionnaire results are an accurate reflection on the population there are not too many Amiganesses around – a rare, but ever-increasing (well at least I hope so!) species.... it would be very nice to see more women in the software/general computing industry.

The coverdisks supplied with your magazine are excellent (well they are light relief after the days of C+VG about eight years ago, (I can remember when I was about ten, typing in the endless pages of games listings into my Atari 400 only to find there were billions of errors in the code which I was too young to correct)).

I would also like to comment on the nature of some of the games on the market today. Recently I played two games which made both my brother and I think 'yuk!'. The first was *Cortex+* by LSD which made me think that it's author must be pretty sick and in need of medical help! One of the features of the game was to shoot alien foetuses – a really tasteful objective! The second game is *Operation Thunderbolt* – after five minutes playtime I began to wonder what was the point of the game and I could see no entertainment value in mindless shooting of people with the occasional cat or dog thrown in for good measure! I am not in favour of game censorship or anything like that (No Mary Whitehouse supporter here!) but surely there should be limits to everything?

Leona Bull
Cardiff

Virus project

I have been an owner of an Amiga 500 for about four years and a reader of Amiga Format for about one year, and excellent it is too. I am especially encouraged to read in the July issue that you are going to be doing a run on some hardware projects.

I have a project for you to give some thought to and it could be a godsend in the battle against the DREADED VIRUS that we have all grown to hate and fear. The idea is, as far as I can see, is a very simple one.

Stripping the problem down to its basics. A virus writes a copy of itself out to a disk that has been inserted into the drive (assuming it is not write protected) and sooner or later causes mayhem by varying means.

The solution? Well, if a small LED was fitted to the appropriate innards of the Amiga so that it illuminated each time the drive was WRITTEN to, instead of the green one that only tells you that something is going on with the drive, each time you inserted a disk and the WRITE light came on you would be tipped off that something was amiss!

Admittedly some commercial software writes high scores etc to the disk but this is only at the appropriate time and thus could be ignored. Also, and I stand to be corrected if in error, I believe that the majority if not all viruses write themselves out to a disk almost as soon as it is inserted.

a) Insert Disk
b) LED lights/flickers
c) Panic
d) Track down virus and eliminate with extreme prejudice

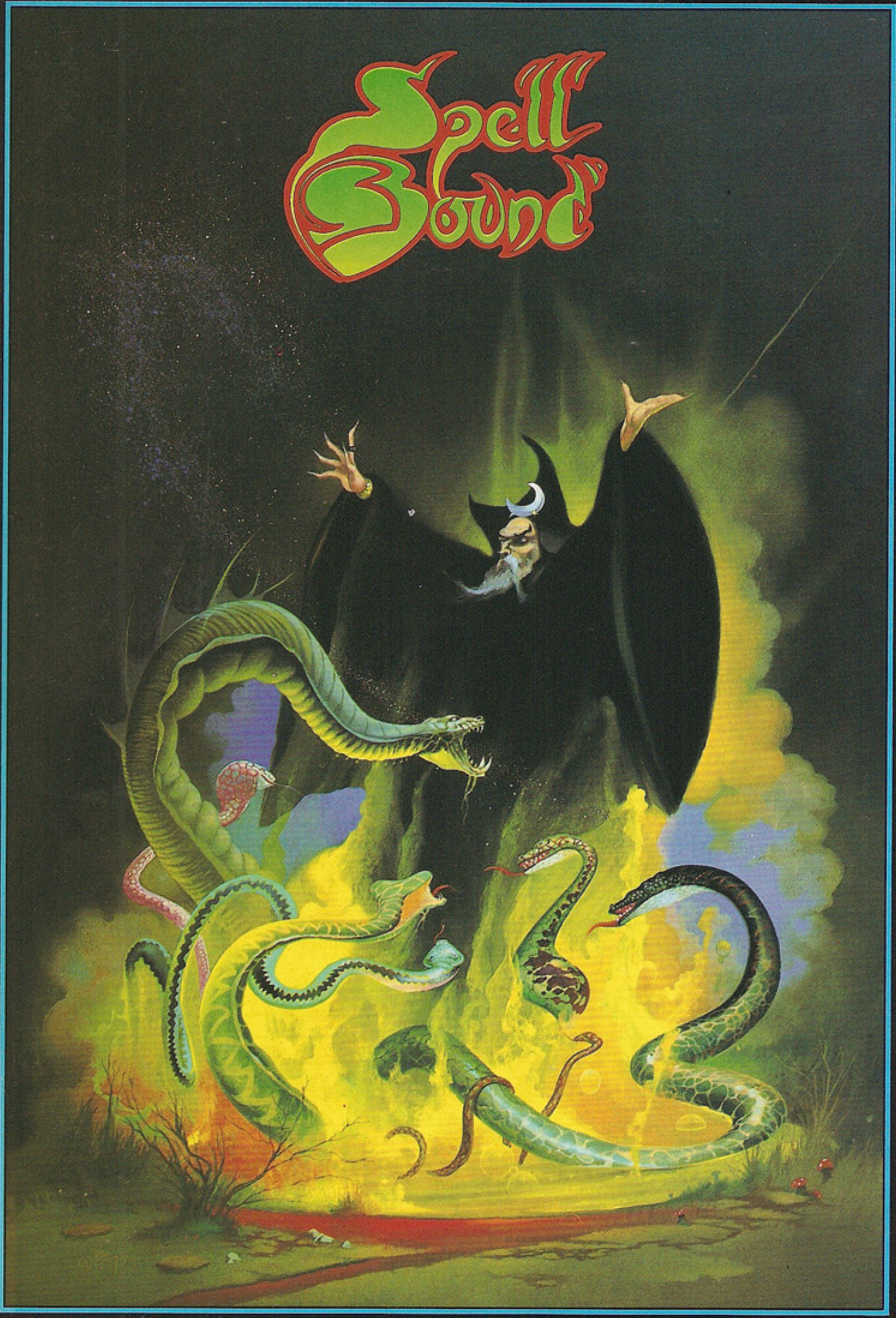
Am I right? If so, how about a little sketch on how to wire up said LED. If I am correct why has this not been incorporated into PC's ST's, in fact all personal computers. All I have ever seen is an LED which, like the Amiga, just tells you the disk is being accessed. Why don't manufacturers put two LED's on the drives of different colours? Say, green for when a disk is being read and red for when it's being written to.

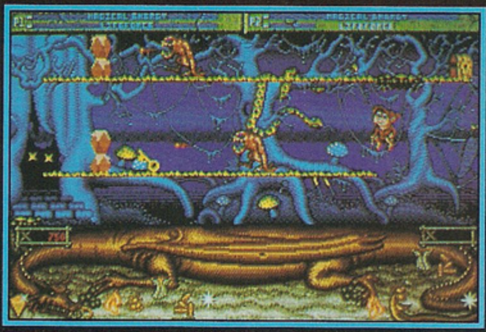
Delboy
Southend-on-Sea

Viruses are still a relatively recent phenomenon that the hardware manufacturers have not had time to respond too – if they intend to that is. As for your project idea, I've passed it onto the tech ed and we'll see what we can do. However, there are already hardware devices available that can detect viruses.

Just goes to shows, yah?

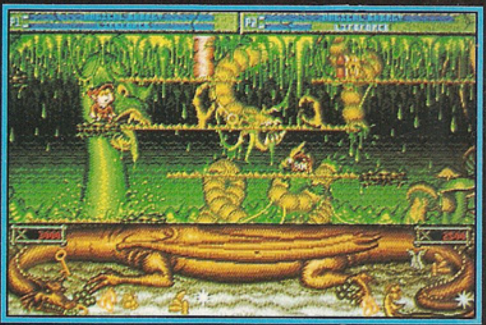
I wonder if you can help me. In the past four years I have visited the PCW Show in London twice and as I was planning to go to a computer show this year I thought I might go to the same one again. However, I didn't hear anything of the PCW Show last year and so I was wondering if it was still running. I would like to know your opinion on what computer show would be best for someone like me who is interested in the whole personal and home computer scene, rather than just my Amiga alone. I heard that the Computer Shoppers Show was very successful last year but is this really the 'biggest and best'?











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As these are obviously very worthwhile events, I would be grateful for any help you can give.

Alexander Kerr
Downton, Wiltshire

Both the Computer Entertainment Show which replaces the PC Show (Earls Court, 15-16th September) and the Shopper Show (Wembley Conference Centre, 6-9th December) should be worth visiting, as will the Commodore Show in Novemeber – more details on that one next month but for the moment keep your diaries clear for the 16-18th November.

Fourteen and fighting

Well, on reading the letters page of issue 11 of Amiga Format, I became slightly perturbed by a letter from David Carver against piracy. If David is reading this, I would like to inform him of a couple of relevant facts concerning 14 year olds.

1. All 14 year olds are not pimply!
2. 14 year olds are renowned for their patience!!

Although being a 14 year old, there is a very slight chance that I may be biased. Maybe David could send us a photograph with his next letter so that we could make fun of his facial blemishes.

Piracy is self-defeating. If you spend 25 quid of your hard earned cash (in my case anyway) on a game and you get home you will spend time getting into the game. Time after time you will go back to the game for another attempt at completion. But if you get a game from a pirate, then you might have a couple of "goes", but the pizzaz has gone from the game and it soon ends up at the back of the disk box.

There are two types of pirate which can be thought of as big fish and little fish. The big fish have no reason for cracking a game apart from making their collection bigger. They hardly ever play their games, but a big collection can be shown off to other pirates.

Little fish do it for the games, if a new game comes out that they cannot afford or that they are not sure is worth £25, then they will get it off the local pirate.

Morally piracy is wrong. It is like stealing a wooden chest from a carpenter who has put his heart and soul into his work.

J E Prouten
St. Lawrence, Jersey

Lame lament

What the bloody hell is a lamer?
Is it:

a) Another name for someone with a case of leprosy?
b) An animal that looks like a sheep on stilts? (no, that's a llama, isn't it?)
c) Jason's (whoever he is) secret identity?
d) A creature that sleeps on the ceiling all night until morning, when it mysteriously disappears just as you find something the right size to kill it with?

Bibble, bobble, bibble!

Ben Ward
Teignmouth, Devon

Actually, 'lamer' is a name coined by certain Amiga users to describe someone who doesn't know that much about the Amiga technically. Hence the naming of the 'Lamer II' virus to catch out the unwary. Unfortunately, the folks that coined the phrase seem to consider 99% of Amiga users to be 'lamers'. Ho-hum.

One flew over the cuckoo's nest...

Can I call you Bob? Such a lovely name, I always wanted to marry a writer – perhaps you would be kind enough to send me an autographed picture of yourself. I enclose a recent photo for your personal viewing – that's me on the far right (with the whip). It's a promo still from my latest film – Dawn of the Amazons*. Of course, I only play a cameo role as one of the warrior Queen's bodyguards – but I like black leather and the hours are reasonable. Maybe you could ask one of your software houses to do an Amiga version – I'm sure it would sell very well.

Which brings me to my point. I read in a recent issue of your magazine only 2% of your readers are girls like me. I can't think why, maybe you should have some more feminine features – like "How to turn your man on with an Amiga" or "Beauty tips by computer." My boyfriend, Urgh (unusual name – but he's foreign) says "Kamputea ur fir puftas und smirt asses. Urgh keel geeg-cat, monge beeg-gray-wrinkly, kik horny-beast!" This (roughly translated) means "Computers are for sissies and high-brows anyhow. Real men wrestle with Tigers, eat Elephant steaks and play catch with Rhinos." He's just a big playful teddy bear, really.

So, girls, take it from me. If you want a boyfriend who eats Rhino droppings and plays catch with Rotweilers – put on a short mini (you can borrow one of mine, just ask), nip down the town and drink plenty of Vodka. If you'd like a serious boyfriend with some sort of future, then buy an Amiga and read Format.

Sarah Goodswen
Redcar, Cleveland

* Sequel to "Dawn, Mistress of the Jungle"

What?

Two flew over the cuckoo's nest...

Who does this Jason Holborn character think he is? In castigating AmigaBASIC for being slow does he dare to suggest speed is a required attribute? Why, the leading physicians of the day inform me that if the human body travels at speeds in excess of 5mph, it will be unable to breath. And without air, good sirs, we will die.

In reviewing *AMOS* our learned colleague suggests bypassing of Intuition is a good thing and its lack of support isn't much of a loss. Behold! The man is a witch and a heretic! This council has decreed: He should be taken from his place of residence, legs broken with a backswing from the ancient sword of the Lictor, dragged through the streets of Bath (to the place of his final execution) for all to see with the sign of the unclean attached to his string vest.

Upon reaching this place he shall be made to lay upon the ground and his four quarters attached by chains to the rear of four horseless carriages. From there the leader of the council shall appear in a flash of blinding light and acrid smoke. Shall take from his belt the ancient fish; and shall slap the heretic about the face with the fish 3 times and ten. Whereupon the heretic Holborn shall admit his sins to the world and admit that Intuition is a wonderful thing.

This punishment shall be carried out in this, the year of our Lord, 1601.

Ernst Grump
Witchfinder Generally to HM Government 1597 –
Redcar, Cleveland

Aaaaaaaaaaaaaah, I see. If anyone has spotted who the deranged individual is that wrote the last two letters, (a clue – it's a man) then please write to me at the usual address, enclosing a picture of him stark naked and sitting in a bowl of jelly at his twelth birthday party. The prize for this will be the usual Tunnocks' Caramel Wafer (8,000,000 made and sold every Bank Holiday) – the first three correct identifications get one.



'One flew over the cuckoo's nest' – if this picture is of Dawn of the Amazons I'll eat my whip, but can you spot the nutter that has written the last two letters?

Guru's Meditations

The page that's best loved in Holland.

NEXT MONTH

The November issue will be on sale on Thursday 11th October and it's going to be the best (and probably biggest – again) yet. Are you ready for…

CDTV – you've heard about the hardware, but we're going to tell you what software is being worked on because that's the key to any machine's success.

Memory expansions – what are the cheapest, biggest, most expandable, cutest looking expansion boards available? We're going to tell you.

Portables – Amigas are not the easiest things to lug around, so what's the ideal portable companion for them?

Basic – what's the best Basic you can get your hands on out of HiSoft and the new GFA?

Animation – a full report with lots of lovely piccies from the Edinburgh Animation competition.

CES report – all the interesting news from the years' big computer entertainment show.

ST emulating – the details on what you can run using an ST emulator (fair makes ya skin crawl, don't it?)

Flight sims – how do they compare to flying the real thing with the RAF? We find out by doing just that in a Jet Provost.

Games – another packed issue including such gems as *F-19 Stealth Fighter*, *Loom*, *Vaxxine*, *Days of Thunder*, *Captive*, *Corporation* and maybe even those pesky turtle things.

Disk – playable demo of the Mindscape smash *Captive*, an essential update for all *AMOS* owners, Kosmos quiz demo and lots more besides.

PLUS: Graphics, Music, Reviews, Competitions, Gamebusters, PD, Letters, Workbench and most importantly of all – this page (although it will have different words on it.)

OH DEARY, DEARY ME

Hands up who spotted the fact that the cyan and yellow films were swapped on last month's contents spread. Now hands up who understands what I just said. Suffice to say that the hands were not supposed to be that ghostly grey-blue colour – although it did have a certain something to be said for it, bleeeeeuuugh mostly.

Some plonker also forgot to put the phone number for G2 who make the G2 VideoCenter. So if you want to contact them call 0252 737151.

ANDY SMITH – AN APOLOGY

We would just like to take this opportunity to apologise for Andy Smith… What?…Oh, I see. What I meant to say was, we would just like to take this opportunity to apologise TO Andy for not bidding him a fond farewell as Reviews Editor in print.

His sterling work on the first 13 issues of AF was a major factor in its success and we would like to thank him for it. He is now off in pastures new, editing our sister magazine S, the Sega mag, and we wish him well.

We would also like to apologise in advance to anybody we've forgotten to thank next issue.

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DIGI·VIEW GOLD

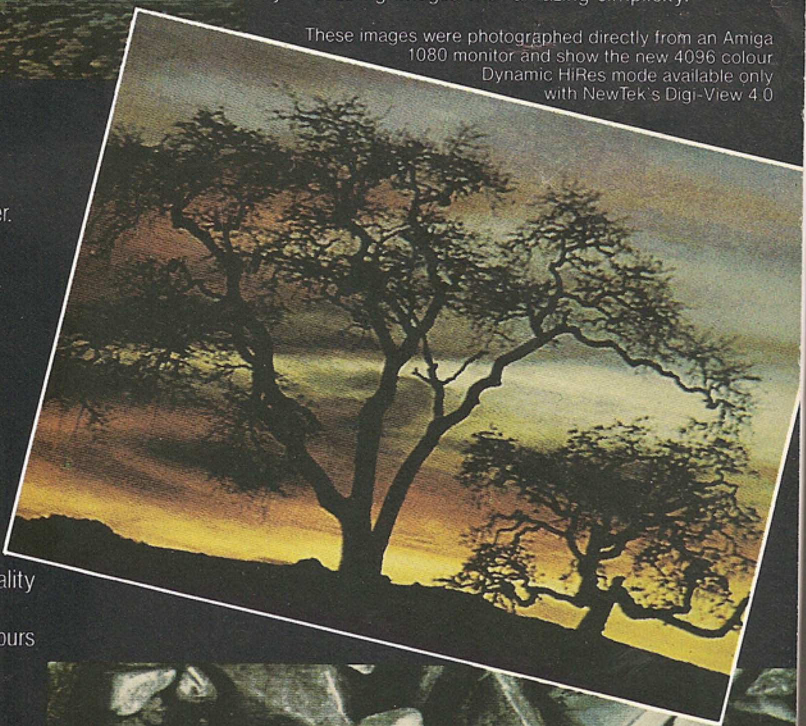
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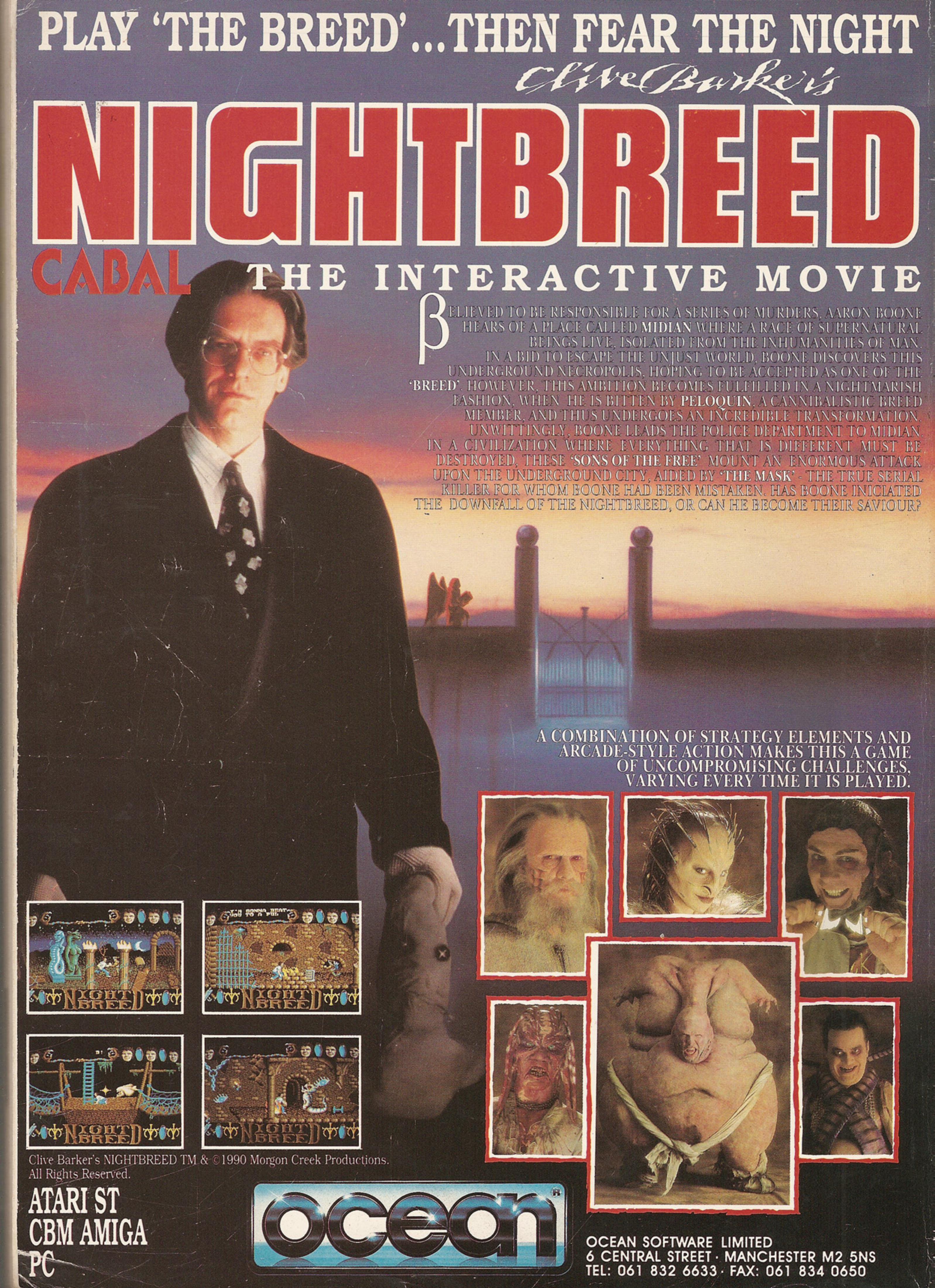
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